THE INTERSTATE MEDICAL JOURNAL.

NOVEMBER, 1901.

ORIGINAL ARTICLES.

CARCINOSIS OF THE INTERNAL GENITAL ORGANS IN THE FEMALE.

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(WITH THREE ILLUSTRATIONS.)

We apply the term "carcinosis of the internal genitalia in the female" to two forms of the disease which, at least in the early stages, can be well differentiated. To the first category belong those cases in which the carcinoma, primarily originating in the uterus or ovaries, by readily forming numerous metastases, soon affects the adjacent structures, such as the peritoneum, parametrium and lymphatic glands, and finally involves the other genital organs. The neoplasm shows in these cases a tendency to progression into the deeper layers. In its transgression and destruction of the tissues on its way, it does not respect the normal bounds of the pelvic organs. Thus within a comparatively short time the whole pelvic cavity becomes the seat of a large mass of diseased tissue which threatens sure and rapid dissolution to the organism affected.

In contradistinction to this category, there is another form of carcinosis of the internal genital organs, in which the advancement of the neoplasm does not take place in the usual way through lymphatic metastases, as just pointed out, but *per continuitatem*. In this second class, which is but seldom met with, the carcinoma remains limited to the epithelial surface; at least in the beginning it advances altogether by creeping along the epithelial stratum, involving only those portions of the inner genitalia which are lined with epithelium. The growth of the neoplasm is a superficial one upon the epithelial layers and within them, and only in the latter stages may the deeper layers be affected. Therefore, we find in these cases the normal shape of the diseased organs preserved.

The following contribution will be devoted entirely to a consideration of the second category mentioned: carcinosis of the internal genital organs *sensu strictiori*. Before entering upon a synopsis of the literature pertaining to this subject, I shall give an account of two observations of my own.

Case I.—Mrs. K., *æt.* fifty-two, complains of severe pains in the abdomen for three weeks; no uterine hemorrhages since the menopause.

August 21, 1894.—Upon examination, diagnosis of a bilateral, malignant ovarian cyst is made.

August 24th.—Laparotomy (Dr. Mackenrodt). Extirpation of both ovarian cysts and fallopian tubes was performed, the latter being removed because they

were considerably thickened. Microscopic examination: carcinoma of the ovarian cysts and tubes.

August 25th to September 17th.—Convalescence undisturbed.

September 18th.—Profuse metrorrhagia suddenly occurs.

September 20th.—Curettement of the uterus. Microscopic examination of the scrapings: carcinomatous degeneration of the endometrium.

October 2d.—Vaginal extirpation of the uterus.

Complete recovery.

Undisturbed state of health until fall of 1895. Several examinations show the absence of recurrences.

September 12, 1895.—Patient calls again for examination on account of vaginal discharge. The upper end of the vagina is filled with a soft crumbling mass which extends into the abdominal cavity; recurrence of the carcinoma. Without the administration of chloroform, as many particles of the tumor as can be reached with the curette are removed. The largest of these soft fungous crumbs is of the size of a hen's egg. Hemorrhage is copious, but is checked by iodoform gauze tampon.

Patient returns to her native town, reporting from time to time that she feels fairly well. Early in 1896 her general health begins to fail; during the following months marked symptoms of cachexia become manifest, and patient dies June, 1896.

Both ovaries are cystic and are of the same size—about that of an ordinary orange. Figure I represents one of these tumors. It is covered with the normal smooth fibrous capsule, there being no papillomatous growths thereon. On cut section, no evidence of normal ovarian tissue can be made out. The tumor is made up of two distinct parts—a cyst representing the larger portion, and a solid mass representing the smaller. The latter shows a variety of isolated cystic cavities. The fibrous lining membrane of these cystic cavities is smooth except in a few instances where small, wart-like nodules resembling stringed pearls are to be seen. Papillomatous growths which are still very soft, even after being kept in an alcohol preservative for several years, spring from the thin, fibrous wall of the larger cystic portion of the tumor. Some of these growths follow the concavity of the inner surface, while others, represented by strand-like processes or nodular masses, ranging up to the size of a hazelnut, project into the cavity of the cyst proper. The aspect of these projecting masses could be likened to that of a bath-sponge of fine mesh—*i. e.*, fibers emerge parallel with each other from their common base, then go off in dendritic arborescences and finally anastamose freely with each other. Just like a sponge, when these fibers are swollen by imbibition, the structure of the papillomatous processes becomes more distinct, and fluid can be pressed out of them again.

Both fallopian tubes represent identical conditions (Fig. II). They are 9 and 10 cm. long. A probe of fine caliber can be passed through both the uterine and abdominal ostia. The walls are considerably thickened. The peritoneal surface shows remains of adhesions, but is otherwise normal. The fimbriæ at the abdominal extremity of both tubes are swollen and enlarged, and are still very soft, in spite of the long hardening process in alcohol. The inner surface of the fimbriæ is covered with the same papillomatous excrescences as described in the ovary. The tubes proper are tortuous and bent like a tobacco-pipe. They are unevenly dilated, the dilatation being more pronounced in the outer portion. The lumen is completely filled by a cauliflower growth which rises from the inner surface and is easily detachable from its base.* The greater part of these excrescences are soft, but some are brittle. They resemble the papillomatous excrescences in the ovary; imitating, however, in some places, the form of grape-like clusters. Here and there, fibrous septa arising from the tubal walls break

*In Figure II it can be seen that these cauliflower excrescences have fallen off in some places.

in between the protuberances. Small round cysts, out of which the contents have fallen, are found in the tubal wall. Similar cysts still containing a marrow-like substance can be seen in the uterine extremity of the tube.

The uterus (Fig. III) is 10 cm. in length. In the left part of the posterior wall a subserous myoma, a little larger than a hazelnut, is protruding. Otherwise the outer surface appears normal. The fundus is considerably hypertrophied. The posterior wall is one-half cm. thick, being pushed out by a neoplasm which originates from the inner surface of the whole anterior wall of the corpus and of the upper third of the cervical canal. The irregularly shaped protuberance ends in an entanglement of fine villi, warts and papillæ. The lumen of the uterus being completely obliterated in this fashion, the growth impinges directly upon the posterior wall. In the hardened specimen, the border between neoplasm and normal tissue cannot be distinguished.

Upon the inner surface of the posterior wall there are miliary nodules which extend a little further downward than the neoplasm on the opposite side.

A microscopic examination was made of all parts of the internal genital organs. The pieces examined were hardened in alcohol, embedded in celloidin and stained in the usual way.

I found in the ovarian cyst the typical picture of adenocarcinoma: in the papillæ projecting from the inner surface there is an excessive increase of the glands. The glandular epithelial cells are cylindrical in form and show marked proliferation, which in some places results in filling the gland cavities and the interstitial spaces between the branches of the papillæ. In many places epithelial cells and leucocytes invade the connective tissue of the stroma of the papillæ. The wall of the ovarian cyst is made up entirely of connective tissue. Some small glands, in which the epithelium is several layers in thickness, can be found in but a few places, especially where the wall is somewhat thinner. These glands lie between the fibers of the connective tissue, near the inner surface. In deeper layers of the wall, near the outer surface, there are a few transverse sections of glands, the epithelium of which forms only one layer.

The tube also shows the characteristic features of adenocarcinoma. In no place, however, was I able to find the glands penetrating into deeper layers of the tubal wall.

Sections through the uterine wall, the seat of the neoplasm, present the following picture: the mucosa is raised up in the form of long, delicate, richly ramified papillæ, which are covered with but one layer of cylindrical epithelium. Within the lymphadenoid stroma of the papillæ numerous transverse and oblique sections of glands are seen; in these, also, the epithelium is but one layer in thickness. Other places, however, even in the same field, show marked proliferation of the epithelium, both on the surface of the papillæ and in the glands. The proliferated epithelial cells have not only penetrated into the stroma of the papillæ, but have also completely filled the spaces between the papillæ. In transverse sections, the glands are covered with many layers of epithelial cells in such a manner as to be almost entirely filled, forming solid masses in a few places. The stroma shows no longer the typical picture of the lymphadenoid tissue of the uterine mucosa. The scanty connective tissue lying between the numerous newly-formed glands has a distinct fibrillary structure.

At the base of the papillæ there commences the ingrowth of the glands into the innermost layers of the uterine muscularis. All the glands found here are lined with numerous layers of epithelium, even at those points where the papillæ are covered with but one layer, as described above. The greater part of the muscular wall of the uterus is perfectly normal.

Thus we find in the uterus an adenocarcinoma co-existing with its preliminary stage—*i. e.*, a (malignant) adenoma.

The scrapings which were removed from the vagina at a later period, as before mentioned, show the typical picture of adenocarcinoma.

CASE II.—Mrs. S., fifty-five years of age. Menopause twelve years ago. Has had irregular hemorrhages for the last nine years. A "polypoid growth" was removed from the uterus by means of an electric snare four years ago by another physician. After an intermission of one year the hemorrhages returned, being increased in degree and frequency. The last one, seven weeks ago, was very copious. During the intervals between the hemorrhages, a great deal of "purulent" vaginal discharge of offensive odor. Patient has a hypertrophy of the thyroid gland, is very adipose, and is still gaining considerably in weight during the last months.

May 11, 1900.—Small pieces are removed from the cervix uteri for microscopical examination. The latter gives the histological picture of adenocarcinoma.

May 22, 1900.—Vaginal hysterectomy with the Paquelin cautery, so-called igniextirpation, was performed by the author. In connection with the uterus the left markedly thickened fallopian tube is removed, which is adherent to the posterior uterine wall. As the left ovary and the right appendages appear normal, they are left *in situ* in order to shorten the operation.

Complete recovery.

Patient has been examined since the operation October 9, 1900, May 31, 1901, and October 17, 1901. She feels perfectly well. Vaginal examination: soft scar in the vaginal fornix, no sign of recurrence.

The uterus is 12¾ cm. in length, the walls are 1 cm. thick. The whole cavity, including the cervical canal down nearly to the external os, is covered with a fungous new-growth which has, in spite of the alcohol hardening, retained its natural softness. The whole mucosa appears to be involved, and in no place is it possible to make out the smooth velvety surface of the normal mucous membrane. In the corpus the growth does not seem to penetrate deeply into the uterine walls. Only in the cervix has the growth advanced into deeper layers of the muscle, reaching the tissue next to the outer surface.

The tube, 7¼ cm. long, is tortuous and dilated by a growth that springs from the surface of the mucosa, and consists of many delicate finger- or tree-like processes, or takes on, in a few places, the form of small polypi, which are covered with small irregular elevations. The whole tube is very soft to the touch. The abdominal ostium is closed, the fimbriæ being normal, while the uterine end is penetrable to a fine sound.

Pieces from different parts of both uterus and tubes were prepared for microscopical examination in the same manner as described in Case I.

In the uterus there is a typical adenocarcinoma. The glands are multiplied, have many layers of cylindrical epithelium, and are penetrating into the innermost layers of the uterine muscle, the middle and outer layers of the latter being entirely free. It is only in the cervix that the proliferated glands reach the outer muscle layer.

The walls of the tubes show a considerable increase of connective tissue. The normal folds of the tubal mucosa have nearly entirely disappeared; proliferation has taken place, and, as a result, many new glands are found. The cavities of some glands are filled. In others the outer contours are interrupted by epithelial cells which penetrate through the borders of the glands into the stroma. In the inner circular layer of the tubal walls some of the finest lymphatic vessels are already invaded by groups of polymorphous cells. Scattered through the tissue of the outer longitudinal layer there are a few large polymorphous cells, but no direct connection between them and the neoplasm in the mucosa can be detected.

The two cases which I have described in the foregoing illustrate very well the definition of carcinosis of the genital organs, *sensu strictiori*, which was given in the beginning. Both cases show the multiplication of cancer within the epi-

thelial stratum, the first presenting a more marked degree of development than the second.

In the older literature we find only a very few records of simultaneous carcinoma of both uterus and appendages. Before our knowledge of cancer had grown sufficiently to enable us to make a diagnosis in the earliest stage, in the cases which came to operation or post-mortem, the whole pelvic cavity was always found to be involved. A correct understanding was obtained when we began to operate at a time when the cancer was not yet too far advanced.

Reichel[24] was the pioneer in this question. In 1887, he called attention to those cases of carcinoma "in which uterus and ovary are alone the seat of the malignant neoplasm, and in which no other seat of the disease can be detected by clinical examination or at autopsy. Therefore, if in such cases the disease in both organs does not originate simultaneously and independently from each other, but in the form of a metastasis, the mode of metastasis is entirely unusual and rare." Reichel referred to seven cases of this kind in which the ovaries and uteri showed the picture of glandular carcinoma. Regarding the extreme rarity of secondary carcinoma of the ovary and the conspicuous size of the ovarian tumors, the primary seat of the disease had to be attributed to the ovary in five of his cases. In the remaining two the origin of the cancer could not be determined with certainty.

As far as the mode of metastasis was concerned, Reichel took the stand that the propagation of particles of the carcinoma might have taken place in the same manner in which the impregnated ovum reaches the uterine cavity—*i. e.*, by way of the tubes. Analogous cases are found in the literature of general surgery—for instance, cases of primary gastric cancer with secondary deposits in lower parts of the intestines; furthermore, cases of multiple carcinoma of the rectum.

Reichel was not surprised to find the tubes in a perfectly normal condition, even though they had served as canals for the propagation of the disease, as it was the general belief at his time that only in extremely rare instances the tubes are to be found involved by primary or secondary cancer. This view, of course, cannot be maintained at the present time, inasmuch as the number of records of carcinoma of the tubes is growing every day. Cases of this kind have been reported by Orthmann,[20] Saenger,[28] Alban Doran,[4] Knauer,[15] Fischel,[8] Roberts,[25] Routier,[27] Westermark and Quensel,[34] Cullingworth,[3] Hofbauer,[13] Falk,[6] Zweifel,[37] von Rosthorn,[26] Osterloh,[21] Fabricius,[5] Wynter,[36] Fearne[7] and others.

Yet, we must believe in this way of the establishment of metastases, in Reichel's cases, until we find a better explanation for the integrity of the tubes.

In his seven cases the carcinoma of the ovary was combined with a carcinoma of the body of the uterus. This coincidence induced Reichel to the wrong conclusion that in regard to carcinomatous degeneration there is a certain relationship between the ovary and the body, but not the cervix or vaginal portion of the uterus. Other publications, however, will show us that this coincidence is merely accidental.

Further reports of a few cases of simultaneous cancers of uterus and ovaries are brought forth by Leopold,[16] but it is not stated by him whether the metastatic new-growth in the uterus was limited to the mucosa or not. Leopold emphasizes the fact that in most cases of carcinoma or sarcoma of one or both ovaries, the rest of the genital organs remains perfectly normal and without the slightest changes. Speaking of the complications and metastases of ovarian

carcinomata in general, he states that the unilateral cancers remain solitary for a long time and but very seldom involve the other sexual organs. The bilateral ovarian cancers produce, as a rule, severe complications, but they rarely advance upon the rest of the genital organs.

H. W. Freund[10] found the peritoneum to be involved in a large number of carcinomata of the ovary, but does not mention that the uterus or tubes were afflicted.

Lerch[17] has examined twenty-two cases of primary carcinoma of the ovary. Out of this number in but five cases were metastases found in either the uterus or tubes. It is, however, not stated clearly whether the secondary growth was located in the epithelial stratum of these organs.

In Olshausen's[19] case, a bilateral malignant ovarian tumor was combined with an epithelioma of the tube, the uterus being perfectly normal.

Hofmeier[14] mentions two cases pertaining to the subject in hand. In the first case a carcinomatous ovarian tumor was removed by laparotomy. Six months afterwards an adenocarcinoma of the uterus became manifest in the same patient. In the second case there co-existed a cancer of the body of the uterus, a malignant ovarian tumor and a pyosalpinx.

Loehlein[38] demonstrated a case of primary carcinoma of the body of the uterus with simultaneous carcinoma of both ovaries.

Also in Gottschalk's[33] case a primary carcinoma of the body of the uterus has produced metastases in the ovaries.

Similar observations are published by Meyer,[18] Verstraete[32] and Wehmer.[31]

It may be noted that in the cases in literature so far recorded, the growth of the carcinoma has not extended over a very large portion of the epithelial stratum of the genital tract. The following instance, published by Gebhard,[11] tells us of the carcinomatous degeneration of the greater part of this epithelial stratum. In this case there was found a degenerated papilloma of the ovary, together with metastases in both the tubes and the cervix uteri. The ovarian tumor consists partly of small cysts filled with a thick yellowish fluid, partly of solid portions of extraordinary softness. On microscopic examination the latter shows the picture of papillary carcinoma. The abdominal end of the tube is firmly adherent to the tumor. The outer third of the tube is somewhat dilated. From its mucosa there project numerous carcinomatous papillary outgrowths. The mucosa of the body of the uterus is smooth and a little thickened, but otherwise perfectly normal. The whole cervical canal and even a part of the vaginal portion is lined with villous excrescences. These under the microscope are found to be of adenomatous structure, which shows a decided increase of glands in all stages of carcinomatous degeneration.

To return to my own cases, the question arises which of the carcinomata is the primary one. In regard to this question, it may be said that in Case II. the carcinoma is located primarily in the uterus, that in the tube being secondary. This fact is brought forth from the larger extension of the new-growth in the uterine and cervical cavity. Here the carcinoma evidently exists for a longer time than that in the tube. I refer to Cullen,[2] who says (p. 354): "It sometimes happens that in the very earliest stages the whole mucosa (of the uterus) is found to be involved, development apparently taking place simultaneously in all parts of the cavity."

In this case the carcinoma was not transported in the usual mode, through

FIG. I.

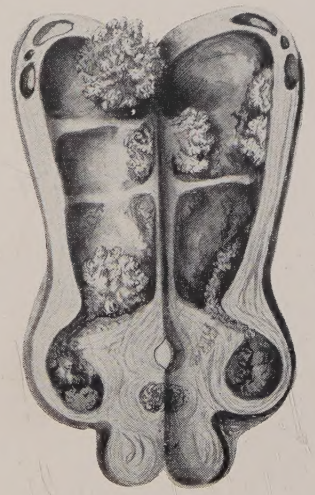

FIG. II.

FIG. III.

Del. Paula Guenther, Berlin.

the lymphatic vessels, but advancement took place *per continuitatem* in the epithelial stratum. In this respect, Bland Sutton[30] says: "Cancer of the body of the uterus extends along the mucous membrane and invades the tubes. This I have seen on a few occasions . . . . . but extension of uterine cancer in this direction is the exception rather than the rule."

In Case I., which requires the greater interest because of the conspicuous extension of the disease, it is beyond question that the carcinoma has appeared first in the ovaries. It is well known how often papillomata of the ovaries undergo carcinomatous degeneration. According to the researches of Pfannenstiel,[22 23] about one-half of all papillomatous ovarian cysts are carcinomatous. Moreover, the ovary in itself is especially inclined to primary carcinomatous degeneration (Gebhard[12]). Again, secondary cancer of the ovaries is rare (Birch-Hirschfeld[1]).

Winckel[35] also asserts that a secondary carcinoma of the ovary is of extreme rarity. He himself has found only two cases of this kind, and attributes this rarity to the well-known curious rule that organs which are frequently the seat of primary cancer are rarely the seat of secondary deposits, and *vice versa*.

Cullen, in his classical work on cancer of the uterus, draws from his own investigations the conclusion that in operable cases of carcinoma of the cervix (pp. 155 and 327) and of the body of the uterus (p. 437) involvement of the appendages, especially of the ovary, is rare.

The opinions on the frequency of secondary cancers of the ovary differ greatly, but after a careful study of the literature pertaining to this subject, I cannot agree with Bland Sutton, who says (*l. c.*, p. 76) "that in the majority of instances cancer of the ovary is secondary."

According to Birch-Hirschfeld (*l. c.*), it also seldom happens that the ovaries are affected with cancer by direct extension from adjoining organs; and I may add, that there is not yet a single case recorded in which the carcinoma of the uterus has extended through the tubes to the ovaries.

Finally, the clinical aspect in Case I. is of importance. The disease of the ovaries dominated the clinical symptoms. The patient when first seen stated that she observed an enlargement of her abdomen, and complained of severe pains, which started about four weeks ago. On examination, a bilateral ovarian cyst was found. Since we have to suppose that these cysts were of far older, but unrecognized standing, we may be justified in presuming that the pains started when the growth of the cystic tumors increased in rapidity. Most probably the onset of pains, then, marks the time when the tumors began to undergo carcinomatous degeneration.

The characteristic changes in the ovaries are, macroscopically and microscopically, much more significant than in the other diseased organs. We have seen that in the ovary there exists a fully-developed adenocarcinoma. The carcinoma in the tubes shows a more marked development in the lateral third than in the uterine portion. That in the uterus is apparently much younger. Here it is just passing through the preliminary stage of a malignant adenoma, and has developed a real adenocarcinoma only in certain parts of the mucosa. Taking all these points together, we arrive at the conclusion that in our case the carcinoma was primarily seated in the ovaries.

I am well acquainted with the fact, which has been emphasized by a number of trustworthy and accurate observers, that sometimes the secondary cancer may

grow much more rapidly than the primary one, but there is no evidence for a supposition of this kind in the case in hand.

There is but one more possibility, namely: that the tubes were the primary location of the carcinoma. Such a case, however, would be unprecedented. That primary cancers of the tubes can produce metastases in the ovaries or the uterus has been demonstrated by Saenger and Barth,[29] and but recently von Franqué [9] has collected seven cases of tubal cancer with secondary deposits in the mucosa of the uterus. But metastatic formations from primary cancers of the tubes are too rare to be seriously taken into consideration.

The mode of propagation in this case (I.) has not been the usual one. The progress of the disease can be traced very distinctly in our specimens. From the ovaries the neoplasm has extended first to the tubes. But it is inexplicable how this happened. No matter what the nature of carcinoma may be—whether parasitic or otherwise—we must expect that the walls of the ovaries must be perforated in some place in order that particles of the carcinoma can be implanted on the fimbriated end. I did not, however, succeed in finding such a perforation, either when carefully inspecting the walls of the ovaries with a magnifying glass or when examining every suspicious or even somewhat thinner portion of the walls under the microscope.

Therefore we must refrain from giving an explanation as to how the carcinoma has extended beyond the bounds of its primary seat, but from then on we can trace it on its way with the greatest certainty. Starting from the fimbriæ it crept along the inside of the tubes, and finally invaded the uterus. In the latter it preferred the anterior wall for reasons which we cannot explain; it passed over the internal os, and only stopped in the cervical canal at the line where the cylindrical epithelium of the cervix and the squamous epithelium of the vaginal portion are in contiguity. This limit, as is well known, is rather indeterminable, as in senile uteri the squamous epithelium may reach above the external os, and is even occasionally found near the internal os.

The posterior surface of the uterine cavity has also been affected. The dissemination of small nodules upon otherwise normal mucous membrane, as described, suggests the idea that here the implantation has taken place by *direct contact*—a comparatively rare way of contamination.

It is noteworthy that in our patient both ovaries have undergone a primary carcinomatous degeneration at the same time. From the ovaries the carcinoma passed over to the tubes, either simultaneously or at least after a short interval, and from both tubes the cancer has—again simultaneously—invaded the uterus.

From the foregoing it is evident that Case I. most clearly illustrates the mode of extension of carcinosis of the internal genital organs and what the final outcome may be. I have not been able to find an equally instructive case in literature.

These cases of carcinosis are not only interesting to the pathologist, but are also important and valuable from a practical standpoint. Reichel has already drawn the correct conclusion from his observations that, in case of carcinoma of the ovary, the uterus also ought to be removed, and *vice versa*. I unreservedly agree with this postulate, the rationality of which has been once more demonstrated in my own cases. I believe it ought to be accepted as a rule, that in all cases of carcinoma of the internal genital organs, even if the disease seems to be limited to only one of these organs, total extirpation should be performed, pro-

vided the condition of the patient permits this radical procedure. It is utterly out of place to impair the chances of a complete recovery by preserving the ovaries in the idea of avoiding the disturbances of an artificial menopause.

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SOME PHASES OF NEPHRO-LITHIASIS.*

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(WITH FOUR ILLUSTRATIONS.)

I assure you I feel that the words at my command are inadequate to express my appreciation and thanks for the honor you have conferred on me by selecting me for your chairman. It is an honor of which any one, I am sure, should feel proud. To preside over a society composed of the stars of the medical world is a function of much honor and mutual responsibility—the responsibility for a successful meeting not falling alone on the officers, but on each individual, as on your co-operation hangs the success of the meeting. I desire to express my thanks for the efforts of each member of the society; and to your worthy secretary, Dr. H. A. Juley, too much praise cannot be given for his untiring efforts and enthusiastic zeal in the arranging of the excellent program for our work.

* President's address delivered at Put-in-Bay, Ohio, September 12, 1901, before Mississippi Valley Medical sociation.

The most difficult task to me, as your chairman, has been the writing of this address. I fully realize that the membership of this great society is made up of the representative hard-working and most scholarly gentlemen in the territory in which they reside. A recognition of this fact does not, I assure you, make the writing of an annual address more easy—far from it. I realize that each and every one present has, during the past year, kept himself thoroughly informed on the progress in the various departments of medicine and surgery; hence what I may say in this paper is merely the performance of a duty as prescribed by the by-laws of the association.

It is a pleasure to review the progress made in surgery by American physicians. The birthplace of most operative procedures is found within the domain of the United States, the originator, in many instances, having been at some time a member of this association. What an inheritance for operators of to-day! Review the list, and it is inspiring. We doff our hats in humble adoration to those who, by their labors, have smoothy paved the way and removed many stumbling-blocks of difficulty and uncertainty.

The supreme benefit of these annual meetings exists in the remembrance of the priceless works of those who attend and enter into these discussions.

The beneficent yield of the fruits of the labors of those who have gone before is gathered by us to-day, and a new crop sown, with cultures of modern technique as the fertilizer. The architects and pattern-makers of much of our work of to-day wrought long ago and have passed on their places being filled by others. The yoke is taken up by the younger generation at the point where it was laid aside by these poineers. Sufficient traces of their noble designings have remained to show us that they must have been masters at the period in which they lived.

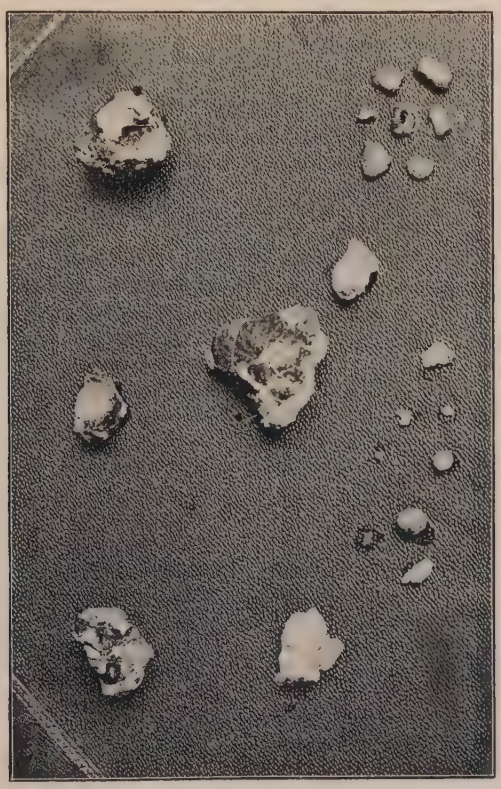
"Originality, after all, in most instances, is the ability to do better what has been done before." Many, old and long since abandoned surgical procedures have been resurrected under new names, and made life-saving and comfort-giving methods by the skilled modern surgeon. While the foregoing statement is, in the main, true, yet as we reflect upon some of the abandoned ideas or practices of a few years ago, there comes a feeling of sad enlightenment, a sagacity that lays our errors bare, and leaves us without excuse in our own eyes. The adaptability of the human intellect in the selection of the good and worthy, and the just rejection of the harmful and useless, is no better amplified than in the noble profession to which we have the honor to belong. It is true that too many modifications of ideal surgical procedures have been placed before our profession by overzealous members, but when tried and found wanting, they have been quickly rejected and thrown into the rubbish heap, to remain there unless resurrected by some one who has not kept abreast of the times, and who knows not the history of their birth, life and death.

> Life is a leaf of paper white,
> Whereon each one of us may write
> His word or two, and then comes night.

We owe our predecessors a debt of gratitude which we can only pay in installments, by accepting their good precepts and following them, or improving them if possible. The great work of our faithful and skilled predecessors would soon become a lost art, and the wheel of scientific progress cease to turn for-

ward, were it not for the labors of the members of our profession who are not content to idly look on at the suicide of the created works and results of the past masters of our art. "Perpetual work is the law of art, as it is the law of life."

Expansion in surgical procedures is not an untried venture with the United States surgeons. The surgery of to-day is certainly an illustration of the fact that pioneers are still working on the surgical frontier. Pathological territory that was unknown a few years ago has been carefully located, surveyed, colonized and taken possession of by the modern pathologist and surgeon. Hemorrhage from incised parenchymatous organs had long been dreaded, and had thus stayed the progress of surgery in these organs for years. When it was demonstrated



SMALL NEPHRITIC CALCULI.

that in most instances this fear was an ungrounded apprehension, the surgery of such organs took its position in the front rank of legitimate and justifiable procedures. This rapid stride has been nowhere noticed more than in the surgery of the kidney, and this event marks one of the notable epochs in surgical history. With the disappearance of timidity on the part of operators, a brilliancy in surgical procedures and results was born that has not been excelled in any other department of surgery.

The surgery of life-essential organs should always, when possible, be prophylactic in its aims. The original pathology should be removed early, thereby preventing the destruction of the function of the organ involved. This means

early diagnosis and quick surgery in all surgical diseases of that organ. In no organ does that axiom apply with more emphasis than to the kidney.

Lumbago, dorsal neuralgias, perinephritic abscesses and sprained backs are far less numerous, and nephritic calculi more frequent since surgery has invaded this locality and proved the true source of these manifested symptoms of a stone, long remaining in the kidney. Persistent urinary fistula will become less prevalent even than to-day, following a nephrotomy, as the diagnosis is made earlier and surgery resorted to sooner.

A wound in a healthy kidney will heal as readily as in any other structure. Recognizing the importance of an early prophylactic operation and the certainty of an early union of the kidney wound, the surgeon of to-day is warranted in resorting to an exploratory nephrotomy when in doubt as to the presence or absence of a nephritic calculus.

Pyonephrosis and hydronephrosis are late manifestations of stone in the kidney, and should not be permitted to occur when the diagnosis is made early in the case. I realize that this is ideal surgery, and cannot be attained in all cases.

The presence of a stone in the kidney is ever a menace to life, and a source of danger to the functional integrity of the kidney affected, and even to the opposite kidney through sympathy, as has often been the case where a calculus anuria has developed when only one kidney was the harbinger of the calculi.

That a stone may form in the kidney at any age has been long known, and that the composition of the stones, as a rule, varies according to the age of the patients, the rule being that this composition is urate of ammonium in children, uric acid in adults, and phosphate or oxalate of lime in patients past forty. The stones may vary in numbers from one to one hundred or more, the size varying from mere grains to several ounces, and the shape varying according to the size and location, and also the chemical composition of the calculus. One of my specimens weighs over three ounces, and is the exact shape as was the dilated pelvis and calices. This was a phosphatic stone.

These calculi may form in either kidney or both at the same time, yet my experience has been confined entirely to stones occurring in the right kidney. Why the right kidney should be selected, no one, so far as I know, has up to this time been able to explain satisfactorily. There are a number of accepted reasons for the displacement of the right kidney in so-called movable kidney. I am firmly of the opinion that some of the conditions existing as a result of this displacement have much to do with the formation of stones, yet I do not believe that this is the only causative factor. The ascending colon, with its ever-present myriads of colon bacilli, and its distended condition resulting from gases and fæces moving against the forces of gravity, produce a pressure on the right kidney and ureter that results in an impediment to the free flow of the urine. This, added to a possible partial bend in the ureter, from a kidney displacement, would produce an ideal condition for urinary sedimentation in the pelvis of the kidney. The colon bacillus has been found so frequently in the pelvis of the kidney in stone cases as to warrant giving to this bacillus some credit for the infection found at the time of the removal; and I believe that its presence here is a factor in the production of the calculi. Extensive suppurative processes in the kidney in the presence of a stone are late developments.

These stones are not formed in a few weeks, but many months and even years may be occupied in making a stone of any magnitude, yet a phosphatic calculus

may form very rapidly. A stone having formed to a size too large to pass through the ureter, will continue to enlarge until its presence brings about a train of symptoms pointing to an involvement of the kidney proper. If the stone is small enough to pass through the ureter without any resistance, its passage may not be discovered. It may escape through the urethra, or, remaining in the bladder, act as a nucleus for a cystic calculus. If the stone is small enough to become engaged in the ureter, and too large to readily go through, it then gives rise to a train of symptoms, the main feature of which is a most intense pain in the back and along the course of the ureter, with retraction of the testicle, irritable bladder and transient anuria followed by a polyuria and blood in the urine after the affected ureter is again opened. With this set of symptoms all are familiar. It is the case which does not present the typical symptoms that we, as surgeons and practitioners, wish to study, as upon a correct understanding of

CASE I.

these atypical cases depends the relief of the suffering and the saving of the kidney.

In cases where the stone does not make its exit from pelvis into ureter, but remains in the kidney, a group of symptoms is presented almost characteristic of this condition. A prior history of nephritic colic is usually obtainable; then a quiescent period, extending over several weeks, months, or possibly years; then a recurrence of the colic spells, or a history of repeated attacks of hæmaturia may be obtained, the hemorrhage and pain being provoked by exercise, riding over a rough road on horseback or in a vehicle. It has been my experience that the cases having hæmaturia most often are freest from intense colic. This is due to the stone being irregular and rough, yet too large to become engaged in the pelvis or ureter. While these cases have pain, it is confined to the region of the kindey, and rarely extends down the ureter.

In these cases the pain is never so severe as that caused by the ureteral stone. There may be a large and rectangular stone, and at the same time a "ball-valve" ureteral stone. This would be disposed to mislead at the time of operation. A carefully gleaned clinical history will usually point to the correct condition and location of the stone or stones.

A large or small stone in the pelvis of the kidney, which intermittently blocks the ureter, will give rise to a pyonephrosis or a hydronephrosis, transient in character, the constitutional manifestations depending upon the presence of infection in one, and the absence of infection in the other.

If an extensive infection of the pelvis is present, the characteristic enlargement will take place at the site of the kidney, and if the ureter is more or less patent, an abundance of pus will be detected in the urine. Many of these cases of calculous pyuria will give rise to a persistent cystitis as the dominant symptom, and bladder washing will often be resorted to without avail. A large or small stone in the kidney, when accompanied by infection, is a constant menace to the functionary safety of the kidney. In arriving at a diagnosis of a nephrolithiasis with infection of an enlarged kidney, gall-stone colic must be eliminated. This is done by the usual symptoms of a chole-lithiasis, and their absence or presence.

Where there is suppuration and a large stone, the diagnosis is easy. While it is desirable to diagnose these cases, our efforts should be expended in the direction of preventing the formation of these large stones, thereby warding off the late destructive processes in the kidney brought about by permitting these stones to remain until this suppurative process occurs. A history of previous renal colic, even though long ago, the presence of lumbar pains on one side (when crystals of uric acid and oxalate of lime are frequently found), tenderness over the kidney, recurrent hæmaturia, irritable bladder or pain and hæmaturia increased by exercise, etc., is sufficient to warrant a diagnosis, or an approach to the same, justifying an exploratory incision. This procedure is a safe one, and no harm will result from it in skilled hands. Many other conditions, giving rise to pain, etc., may be relieved by this operative procedure.

A number of other conditions of the kidney and ureter give rise to symptoms simulating stone. These are often relieved by this so-called exploratory incision. It must be remembered that a calculus may exist in the kidney without giving rise to any symptoms. X-ray examinations will show the presence of large calculi, but a failure to find a stone by this method should not deter the surgeon from exploring for it when symptoms point strongly to its presence. A kidney stone that fails to pass through the ureter, and assumes a quiescent state, is a dangerous tenant and should be removed.

Case I.—Mrs. B., right kidney. Twenty years ago she passed the first calculus from the right kidney. This stone was the size of a small mulberry. She had passed considerable "sand" for some months prior to the passage of the first stone. This stone was seven weeks passing, causing intense pain. She had a comparative freedom from pain for twelve years, then passed a second stone, not so large as the first, but which caused much pain during its passage. After this attack she passed a great deal of "sand." She continued having attacks of renal colic at the rate of two or three a year, passing stones with each attack. These stones were irregular in size and shape. Three weeks ago she passed three small stones.

She has not had much pain in the back. The pain has been in front, over the kidney and down along the course of the ureter and distribution of ilio-inguinal and genito-crural nerves. During the passage of the stones the bladder has been irritable. All told, she has passed from the kidney thirty or forty stones. Six months ago she had an attack of renal colic, and the urine became scanty and very cloudy, and blood was noticed. She has never had a hemorrhage from the kidney. During the last six months she has never been free from pain, and in this time she has passed seven calculi. Five weeks before entering the hospital the kidney became perceptibly enlarged and very tender to touch. She had fever and sweats. The urine was loaded with pus, and diminished in quantity. Examination revealed the kidney enlarged, tender and displaced downward. The patient was much emaciated.

Operation, retro-peritoneal incision. Kidney incised on posterior surface, a large amount of pus escaping. On introducing the finger into the kidney I found a mass of calculi wedged into the pelvis and calices, the stones, eight in

CASE II.

number, varying in size from 300 grains to the size of a pea, and composed of phosphate of lime. The kidney was irrigated, and a drainage tube inserted, and gauze packed into the kidney to control the hemorrhage. This kidney was making considerable urine. This case is still under observation in the hospital. She is much improved in weight and appearance. The ureter is open, and her progress toward recovery is all that could be desired.

This lady presented herself to me three years ago, and I made a diagnosis of stone in the kidney and placed her in the hospital for operation, but she left, refusing to undergo the operation.

CASE II.—Mrs. P., aged thirty-six. Several years ago this lady had one attack of right nephritic colic, lasting two or three days. The stone did not pass; or, at least, she failed to detect it. Since then, up to the time of operation, she had a vague sense of uneasiness in the region of the right kidney.

A year before she came under my care she began having a cystitis, and was treated for it by local methods, in the way of irrigations of the bladder, etc.

This course of treatment failed to bring her any relief of the bladder symptoms. The cystitis was of kidney origin. There was no history of hæmaturia or anuria.

Examination elicited tenderness over the enlarged kidney. The organ was displaced downward, and fixed by perinephritic inflammatory agglutination. The usual lumbar incision, post-peritoneal. Kidney incised, and a large caculus of oxalate of lime removed, weighing 1,428 grains. The kidney was drained by a tube. Ureter patent, as fluids and blood passed into the bladder at the time of operation. This kidney was saved, as it was making a large amount of urine.

CASE III.—Mrs. F., aged forty-two. Twenty-five years ago this lady had an attack of right renal colic, and passed a small calculus. She was free from pain for a number of years, when she again had an attack of renal pain, but failed to pass the stone. For years after this she continued to have attacks of pain in the

CASE III.

region of the right kidney. There was no blood in the urine at any time. The pain was never, in any of the subsequent attacks, so severe as in the first. She became practically an invalid ten years ago, and has remained so ever since. A secondary cystitis developed a year ago, and much pus was noticed in the urine. She became septic, and a perceptible enlargement of the kidney developed. This was nodular, fixed and tender to the touch.

The usual post-peritoneal incision was made and the kidney opened, and a stone weighing 1,540 grains was removed. Gauze and tubular drainage were employed. A large amount of pus was present. The ureter was not opened freely, yet I felt that there was no calculus obstruction, as large quantities of pus had been passing into the bladder from the right kidney.

This kidney was making fully a pint of urine in twenty-four hours. The patient is still in the hospital, but her improvement has been remarkable.

DEDUCTIONS.—1. Hemorrhage from parenchymatous organs is, in most instances, easily controlled.

2. Nephro-lithiasis is more prevalent than is generally supposed.

3. A stone having formed in the pelvis of the kidney, if too large to pass through the ureter, will sooner or later produce symptoms demanding its removal.

4. Suppuration, in stone cases, is, as a rule, a late process, and should be prevented by early surgical treatment.

5. A wound in a healthy kidney heals rapidly.

6. Obscure, persistent pains in the region of the kidneys, in a patient who has had a renal colic years ago, should lead to an exploration of the kidney.

7. The operation of nephro-lithotomy has a very low mortality.

8. The kidney should not be removed unless practically destroyed by the disease.

9. There exists a special cause for the development of stones in the right kidney.

10. With a carefully obtained clinical history, the diagnosis of stone in the kidney is usually easy.

11. At the time of operating the ureter should be explored, that its patency can be assured.

12. Post-operative patience and faithful effort on the part of the surgeon will result in the saving of many organs; otherwise removal will be necessary.

A CASE OF OSTEOMA OF THE ORBITAL PLATE OF THE FRONTAL BONE, BRAIN ABSCESS AND THROMBOSIS OF THE CAVERNOUS SINUS.

BY J. W. CHARLES, M. D.,
AND
M. B. CLOPTON, M. D.

The following case is of interest, not only on account of the comparative infrequency of thrombosis of the cavernous sinus, but also on account of the pathologic conditions which were suspected during the course of the malady and verified by the autopsy.

On the morning of March 4, 1901, L. K., an attendant at the St. Louis Insane Asylum, presented himself with the following history: Yesterday morning he awoke with an intense frontal headache. The left eye was red and the lids were slightly swollen. Previous ocular history was negative. He had suffered from occasional headaches, but never of an excruciating character.

Status Præsens—Left Eye.—Lids œdematous and very tense, so much so that they can hardly be separated sufficiently to expose the globe; conjunctiva bulbi chemotic; cornea and iris normal; anterior chamber of normal depth; pupillary light reflexes normal; globe almost completely immobile. The patient complains of extreme pain upon attempting to turn the eye in any direction. Pain not increased by gentle palpation, except at outer end of upper lid, where slight fluctuation could be detected. On account of patient's great suffering, vision was not taken.

Diagnosis.—Orbital phlegmon, probably resulting from a perforation of an empyema of the frontal sinus or ethmoidal cells.

Upon plunging a v. Graefe cataract knife through the upper lid, close under the outer end of the eyebrow, downward and inward, there was released a drop of pus, followed by a considerable amount of dark venous blood; this effected a partial relief of the tension and pain.

The patient was then referred to Dr. Greenfield Sluder for examination of his nose. Dr. Sluder was unable to determine a nasal origin for the condition, but he at once noticed a certain mental torpor.

Calomel, gr. ¼ ter die, and phenalgin, grs. v, every hour pro re nata, were then prescribed and locally iced compresses. Late in the evening the patient was admitted to St. Luke's Hospital. Temperature 101 , pulse 100, respiration 24. Bowels moved freely.

March 5th.—6 A. M., temperature 100.2°, pulse 80, respiration 20. Slept well. Complains of pain in the head. Liquid diet was prescribed. 10:30 A. M., temperature 102°, pulse 80, respiration 20. Made puncture at inner end of upper lid downward and outward into orbit, finding no pus but releasing a quantity of venous blood, and giving patient some relief. Ophthalmoscopic examination showed veins dilated and slightly tortuous; no œdema of retina or of optic nerve. Vision—counted fingers at twenty feet. 12:30 P. M., temperature 102°, pulse 78, respiration 22. 3 P. M., patient had a mild epileptiform attack lasting ten minutes. 4:45 P. M., temperature 102°, pulse 90, respiration 24. Ice-cap applied to forehead and back of neck, on account of severe pain. 12 P. M., temperature 103°, pulse 84, respiration 24.

March 6th.—6 A. M., temperature 102°, pulse 100. Slept very well. Referred patient to Dr. H. G. Mudd, to whom we are indebted for permission to use these notes. 11 A. M., temperature 102°, pulse 86. Under general anæsthesia Dr. Mudd made an incision through the upper lid parallel with the eyebrow. Through this opening the orbit was carefully explored; apart from a marked venous congestion the finding was negative. In consultation with Dr. F. R. Fry the probable diagnosis of thrombosis of the cavernous sinus was agreed upon, and the patient was returned to the ward. 3 P. M., temperature 103°, pulse 100, respiration 44. Pulse very irregular. Twitching in limbs. Was given calomel and bicarbonate of soda, aa gr. v. 5 P. M., temperature 102.4°, pulse 118, respiration 40. ℞ Magnes. sulph., satur. sol., ℥ ss. 8 P. M., temperature 102.2°, pulse 96, respiration 28.

March 7th.—1 A. M., temperature 102.8°, pulse 76, respiration 20. Severe headache. 7 A. M., temperature 103.2°, pulse 78, respiration 24. Slept little. Ice-cap applied. Patient was delirious most of the night. Now very nervous. 9:20 A. M., ℞ Natri. bromid., grs. xx, every two hours. 1 P. M., temperature 102.4°, pulse 70, respiration 24. 4 P. M., temperature 103.4°, pulse 76, respiration 26. Vomited. 8 P. M., milk given was vomited immediately. Patient is very restless. 10:30 P. M., vomited. 11 P. M., temperature 105°, pulse 112, respiration 44. Delirious.

March 8th.—12:30 A. M., temperature 104.2°, pulse 92, respiration 30. Milk vomited immediately. Eye discharging mucus. Pain in right side of neck. 3:30 A. M., temperature 104.6°, pulse 92, respiration 28. 6:30 A. M., temperature 105°, pulse 100, respiration 32. 9:30 A. M., temperature (ax.) 105°, pulse 108, respiration 46. 11:30 A. M., temperature 105°, pulse 110, respiration 46. 2:30

P. M., temperature 105.8°, pulse 120, respiration 48. Involuntary defecation. 5:30 P. M., temperature 106.2°, pulse 130, respiration 52. 7 P. M., hiccoughs. 8 P. M., temperature 106.7°, pulse 132, respiration 54. 11:30 P. M., temperature 107.6°, pulse 160, respiration 60.

March 9th.—1 A. M., temperature 107°, pulse 160, respiration 78. 1:50 A. M., vomited. 2 A. M., died.

Autopsy, March 10th.—Only the brain and the cranium were examined. Beneath the dura, over both parietal regions, was a tenacious fibrous exudate, which also extended over the left frontal lobe. The right side of the base and the posterior half of the left side were free from exudate. The base of the left frontal lobe and the adjacent fissures were covered with a fibro-purulent discharge, and the frontal lobe was the seat of an abscess about the size of a walnut. The contents of the abscess were purulent and bloody, and were contained by a grayish-black membrane, which merged into the much injected brain tissue that surrounded it. The abscess did not connect with the subdural space, but was separated from it by 1 cm. at its nearest approach. At the corresponding point on the orbital plate of the frontal bone, protruded a smooth nodular exostosis, 1.5 cm. in height and 2 cm. in diameter at its base. This pressed into the frontal lobe directly beneath the abscess, and was covered with a fibrous bloody exudate. The orbital plate, when chiseled loose, opened into an empyema of the frontal cells, the osteoma presenting almost as much on the under surface of the orbital plate as it had above.

The left cavernous sinus was thrombosed for its entire course. Cover-slips from the meningeal exudate showed no organisms. Cultures were not made. Sections of the exostosis showed a simple osteoma.

After the patient's death his associates admitted that for several months he had had slight epileptiform attacks, but we were never able to elicit from him any previous history except that of occasional frontal headaches.

Naturally an operation for cleaning out the thrombus could not be considered in view of the cerebral and meningeal symptoms. This procedure is admissible only in a case of a simple thrombus, where the danger of extension to the cavernous sinus of the other side through the circular sinus (thereby causing blindness of the other eye) is imminent.*

* Knapp (Trans. Am. Ophth. Soc., 1900) has reported the successful removal of a "traumatic non-infective" thrombus of the cavernous sinus in which the second eye had begun to exhibit marked signs of venous congestion.

EDITORIAL COMMENT.

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RUDOLF VIRCHOW.

Eighty years ago on the 13th day of October there was born in a little Pomeranian town, Schiefelbein by name, the one whom we delight to honor by the title "Father of modern medicine." The German students used to tell a little story of the master's childhood which, if it be true, has come far from realizing its fulfillment. While Virchow attended the primary school in his native village he was, it is said, known for his lack of the brilliant qualities which characterized him in youth and manhood; so when it came to the end of one term, the teacher, after dismissing his other pupils with various words of advice and admonition, sent the future great man of medicine out to enjoy his vacation with this despairing farewell: "For the others there is some hope, but Rudolf, what in the world are we going to make out of you?"

How ill-advised the German schoolmaster must have considered his remark if he learned later of the epoch-making discoveries made at Berlin and Wuertzburg by the pupil who had caused his despair of earlier days! As assistant in pathology at Berlin he produced, between 1843 and 1850, "Plugging of the pulmonary artery and its results," "The pathological pigments," "Leukæmia," and a host of other evidences of the birth of a new and rational system of pathological investigation; the day of the myths which made up the humoral pathology and the solidar pathology had passed.

But he did not approach the zenith of his glory until 1854, when science awoke at the touch of his transcendent genius to a realization of the truths of the cellular pathology.

And so from that time to this he has gone on as student, editor and teacher, till now he stands without a rival in the field of medical science, to say nothing of the many others in which he has made his energy and influence felt.

May Rudolf Virchow long continue in the work whose results have meant so much to humanity; may the master long continue to guide us and inspire us with his presence. Then when at last he must lay down the burden, all will unite in blessing him who shall have done more than any other single individual to advance the noblest of all the arts.

COMPULSORY STUDY OF THE SPECIAL BRANCHES—ITS EFFECT.

The assertion has been made that the field of the specialist is gradually becoming more and more limited, and that finally the work now done by him will be done by the general practitioner. This we have reason to doubt. The general practitioner should be a general diagnostician. If equipped with suitable instruments, skillful by reason of experience or particular adaptability, and if he have time, there is no reason why he should not treat his patient, no matter what the lesion. We cannot, however, have much faith in the "Universal Specialist." Certainly we would not trust the removal of a cataract from our own eye to a general practitioner, if the services of an ophthalmic specialist were available, nor a tumor of the vocal chord by the unpracticed hand.

We know that in the use of instruments of precision we can only by long and patient training become proficient in their manipulation; and even then finer technique is soon lost unless the practice be continued.

It cannot be denied that, in these days when there is so much advancement made in all branches of medicine, it would be impossible for the busy practitioner to even keep in touch with this advancement; and the profession would soon be drifting backward.

In looking over the medical history of the past it will be noticed that nearly all, if not all, the recent discoveries were made by those who had chosen some special line of work.

That some cases which were formerly only treated by the specialist are now treated by the general practitioner, only proves that the general practitioner is in line with the onward progress of our rapidly growing methods of diagnosis and treatment.

Our schools and colleges are to-day making compulsory the study of the special branches which, but a few years ago, were hardly made mention of; not, however, with the idea that each student should consider himself as specially fitted to treat all cases, but that he should be able to recognize and understand their importance, so that his patient may receive intelligent advice.

That there is and always will be a field for the specialist, and that there is much room for development along all special lines, no observer can well deny.

TRACHEOTOMY IN BREECH PRESENTATION.

"Tracheotomy in Breech Presentation" is the odd title of a clinical report by Dr. Herbert Marion Stowe, of Chicago, appearing in the *Journal of the American Medical Association* of October 19, 1901. The article brings forward an idea which is entirely original, and which deserves serious consideration. The history of the case in brief is as follows:

Mrs. E. M. C., aged thirty-one years, was taken in labor with her second child at 12:30 P. M., September 1, 1901. Dr. Stowe was summoned at 10 P. M. of the same day. Diagnosis of breech presentation was made, the breech being high up and not engaged; fetal pulse 160 per minute. The author decided to extract the child because of the danger of asphyxia. The first act of extraction was easily completed, but after the arms had been delivered the head became fixed in the inlet. By employing the Mauriceau method, combined with strong suprapubic pressure in the Walcher posture, the head was finally brought deeper into the pelvis. Successful extraction of a living child, however, now seemed impos-

sible. Convinced that the child's life was practically lost, the author decided to perform tracheotomy as an experimental operation. The body of the child was lifted up and the neck washed. The perineum was pressed back and then tracheotomy was performed. A soft rubber catheter was next introduced and air gently forced into the lungs by means of an air-bag. The respiratory rhythm was soon voluntarily inaugurated and maintained, the body becoming pink in color. In fourteen and one-half minutes after the delivery of the arms the after-coming head was carefully extracted with forceps. The child was found to be living, respiration having taken place entirely through the tracheotomy opening in the larynx. A stitch was taken on each side of the incision and the ends of the threads tied behind the neck, making effectual retraction of the tracheotomy wound and permitting free access of air when the catheter was withdrawn. Five hours later the wound was closed with fine catgut sutures and normal respiration established. Mother and child made a perfect recovery.

The suggestion of performing tracheotomy in cases where, after difficult version, the life of the child would surely be lost because the head cannot be delivered speedily enough to prevent asphyxia, is a most ingenious one, and will commend itself to all who have had this trying experience. There is no doubt that the life of many a child will be saved by an institution of this procedure in indicated cases. The procedures commonly made use of in bringing help to the child in this almost hopeless extremity can only be applied in those cases where we can reach the mouth—*i. e.*, where we can introduce two fingers into the mouth and allow air to enter through the hollow of the hand, or where we allow air to enter through a catheter inserted into the mouth. Blacker gives in *London Lancet*, October 19, 1901, a historical review of several procedures of preventing asphyxia. These methods, of course, cannot be used where the further extraction of the fetus is made impossible by a firm contraction of the cervix around the neck of the fetus. In such an event it is the rule that cervical contraction always becomes more pronounced when we endeavor to free the clasped head, thus rendering the asphyxia more severe. It is just in this class of cases that the application of Stowe's idea of tracheotomizing the child seems most ideal. It must be remembered, however, that a wise conservatism should guide us in following out Stowe's suggestion, for in instances where the head is merely retained by a rigid perineum an epistotomy will always be preferable to a tracheotomy.

PROSTATECTOMY.

When prostatectomy first began to be done, the mortality was so great (about twenty-five per cent.) that even those most fitted to undertake it, did so with a feeling that it was a last resort of very uncertain ending. The operations were done by the suprapubic route, as furnishing the most accessible and certain way of reaching and removing the obstruction of the prostate. Bleeding was usually great, whether the ronguer forceps to gnaw off the projections, or other means of enucleation, were used. This severe blood loss was a most important factor in lessening the ability of the patient to recuperate from the operation; and as the bladder, after having an opening in it, became flaccid and lost its power of contracting down upon a tampon placed in it to stop the bleeding by pressure, the hemorrhage could be checked only partially and with difficulty. Capillary oozing continued for several hours. Infiltration of urine about the bladder and

especially about the space of Retzius was a serious consideration. Hernia followed a number of recoveries.

Since perineal prostatectomy has been introduced, these unfavorable factors have largely disappeared, and prostatectomy has lost many of its unsavory features. The bladder, having all of its attachments unharmed and being in its entirety, loses none of its contractility. The neck can be compactly and securely plugged with gauze, thus stopping bleeding at once. As the prevesical space is not opened, the danger of infiltration is diminished. Drainage is more satisfactory; and instead of the patient struggling along uncomfortably with dressings more or less saturated with urine, and remaining in bed from three to six weeks, he keeps dry, and passes a comparatively easy decubitus, usually being up and about within ten days to two weeks. The whole picture is quite a different one. As the time consumed in making the perineal urethrotomy and enucleating the prostate is short (ten to fifteen minutes being the average time), the profound shock often encountered in the suprapubic operation is almost entirely eliminated.

In his discussion before the American Association of Genito-Urinary Surgeons, May 2, 1901 (*J. Cut. and G.-U. Dis.*), Bryson reports thirty-nine cases of perineal prostatectomies with three deaths, or 7.5 per cent. mortality, two of these being due to accidental infections (erysipelas and influenza). He states his first operations were by the suprapubic route, with a high mortality. Later he employed the combined suprapubic and perineal method, with a lessened death rate. He now operates by the perineal route, with a mortality that is scarcely higher than that of perineal urethrotomy or cystotomy.

A NEW MEDICAL NIGHT SCHOOL.

It has lately been announced that a new school of medicine is about to be opened as a department of the Temple College of Philadelphia. The preliminary announcement states that the course will be five years, and will lead to the degree of M. D. The sessions are to be held from 6:45 to 9:45 P. M. We cannot but express ourselves as convinced of the lack of wisdom in establishing such a school. The foundation of a medical school which will take its place by the side of the best in the country would require very large endowments, and would include the very best possible facilities for clinical teaching and laboratory work. All the "short-cuts" and easy methods of fitting men for the profession of medicine are to be frowned upon. The argument that such an institution as the one outlined will be of advantage to a number of poor young men who seek to acquire a medical education is hardly tenable. All of our great medical colleges provide scholarships for those who are worthy, and numbers of poor young men have acquired medical education at these institutions. We believe that professional education stands in a place by itself in its advantages, in its claims and in its obligations. The inspiration which leads men to seek knowledge is worthy, but it must be well directed. By this night school method of obtaining a doctor's degree, young men occupying positions during the day will be enrolled and graduated after five years with the coveted degree, and this degree will seek to place them on terms of equality with those who have devoted four full years to the same end. There are a host of objections which occur to us concerning the matter. To our minds the establishment of this school, and another of its kind now operating in Chicago, is a hard blow at higher medical education and all which that includes.

We do not speak in any carping spirit, nor with any personal feeling in the matter, but we think that the standing of the medical profession to-day demands absolutely all of the student's time during his course; that it should be the whole object of those years of his life and not a side issue. All institutions which offer courses based upon night work, or instruction furnished by mail, cheapen the medical degree. Numbers of young men who are earning excellent wages in various walks of life are induced to take these courses and give up a sure livelihood for the precarious existence within the profession; especially precarious for them on account of the fact that they are necessarily not the best prepared, nor fitted to compete with the graduates of the great medical schools. We believe that it should be the business of the State to inquire into the standing of institutions of this kind. Shall every institution which so chooses confer the degree of Doctor of Medicine? Will it be possible for those students to receive the proper laboratory and clinical training which the profession demands? We recognize the high standard of Philadelphia medical schools, and we feel that the establishment of this new school along the lines projected cannot be an advantage to the city as a medical center, to the graduates of such an institution, or to the medical profession.

TETANUS-INFECTED ANTITOXIN OF DIPHTHERIA.

A most unfortunate accident has occurred in this city in the preparation of the diphtheria antitoxin made and issued by the Health Department. Cases injected with diphtheria antitoxin developed fatal tetanus, eleven children having succumbed up to the time of the present writing. Other children, who were likewise infected, survived. The simultaneous outbreak, with the history of the cases, leaves no doubt but that these lives were lost as a consequence of infection of the serum with tetanus bacilli or tetanus toxin. Simultaneously with the death of the first few cases the coroner ordered an investigation. In first order, a commission of three local bacteriologists was appointed to investigate the technical side of the question and to ascertain who, if any one, was responsible for the contamination of the serum. This commission have been at work on the matter during the past week, and will probably make their report in the very near future. Coincidently with their research the coroner has held an extended inquest, summoning all the physicians who have used the serum. Judgment must be withheld until all the testimony is in and the expert bacteriological evidence submitted.

The affair is a most unfortunate one, not only because so many lives were lost, but mainly because the use of antitoxin for some time will be attended with difficulties. The laity are ever prone to cavil at what we know are scientific remedies, but which they do not understand. This is especially true of antitoxins in general. In short, the accident will furnish a formidable weapon to the opponents of antitoxin, of which they will not hesitate to avail themselves. Vaccination has its enemies, and so has antitoxin. This contamination will mean a determined fight on the part of the opponents of the remedy against its use. The medical profession must use every effort to make the public understand that this is not something which can be expected at any time with the use of antitoxin, but that it means an accident which can be prevented at all times when due care and diligence are exercised in the preparation of the product.

Until the report of the bacteriologic commission is in, we will withhold judgment as to who is to be blamed for this untoward occurrence.

MUNICIPAL WATER SUPPLIES.

The matter of purifying municipal water supplies is practically a new one and belongs to the past decade. European cities preceded American cities in taking steps towards securing pure water for use of their citizens, the hygienists abroad having long ago demonstrated the necessity of having pure water by virtue of the severe lessons taught them by the visitations of water-borne diseases. Each epidemic that has been definitely traced to a pollution of a water supply has done a good service, in that it has served to acquaint us with the prime importance of either obtaining naturally pure water or else purifying a known polluted source.

Pursuant with the importance of the subject, American cities, one after the other, have been agitating the question of obtaining pure water. In most instances the matter of purifying water supplies has resolved itself into a filtration proposition. Municipalities have seemingly been content to entertain thoughts of filtering their polluted water supply, with never a thought of obtaining an unpolluted water supply without filtration. Filtration on a large scale seems to be rather a successful procedure in some cases, but is not, of course, to be compared with the idea of using unpolluted water. In this connection the remarks made by Mr. Tribus in the Proceedings of the American Society of Civil Engineers for August, 1901, are quite pertinent and might well be quoted: "Every few years the world takes up a new fad. The fad in sanitary science to-day is filtration. Percentages are dangerous forms of comparison. It may be misleading to speak of the removal of bacteria in percentages. For instance, 99 would seem to be a high figure, yet 99 per cent. removal from water carrying 5000 bacteria per cubic centimeter gives no better result than 95 per cent. from water carrying 1000 per cubic centimeter, in each case 50 per cubic centimeter remaining in the effluent. . . . While endorsing without any qualification filtration of water supplies whenever polluted, it would seem that there can be no question that if a source of supply free from contaminating influences can be secured, such source is to be preferred in comparison even with the best methods of artificial purification possible, conditions of constructive and operating costs, permanence and accessibility for inspection being equal." . . . Further references on this subject show that the consensus of opinion among civil engineers is as follows: "That where the cost is not unnecessarily large, and under other favorable conditions, a pure supply from an uncontaminated source is decidedly preferable to a purified water from a sewage-polluted stream." (Proceedings of the Am. Society of Civil Engineers, Sept., 1901.)

It can thus be seen that the best engineering talent in the country deems it preferable to use unpolluted water in preference to filtering a known polluted source. It really resolves itself into a common-sense proposition. Municipalities will do well to bear this in mind when entertaining thoughts of purifying their water supplies. Better use a pure supply than a filtered impure supply. This detracts nothing from our preconceived ideas on filtration. We recognize the efficacy of filtration and endorse it where an unpolluted supply cannot be obtained. In all other cases let us have pure unfiltered natural water.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Contribution on Aneurism of the Aorta.—Anton Krokiewicz, Krakaw (*Wiener Klinische Wochenschrift*, No. 31, 1901).—In 551 cases of aneurism, 86.37 per cent. were of the thoracic aorta. Of these, 58.8 per cent. involved the ascending aorta, 28.7 per cent. the arch, and 12.5 per cent. the descending aorta. They usually occur where the blood pressure is especially great. The points in differential diagnosis as to the portion of the aorta involved are clearly set forth in this article. The author describes a case in which a large tumor appeared over the left nipple, pulsating asynchronously with the heart. Gelatine injections and other forms of treatment did not deter the increase in its size. A diagnosis was made of sacculated aneurism of the ascending aorta and the bulbous portion within the pericardial sac, chronic endocarditis, cor bovinum, and erosion of the fourth, fifth and sixth left ribs. The post-mortem corroborated the diagnosis. There was also a dilatation of the ostium pulmonale, a very rare occurrence. Some difficulty was experienced in excluding the possibility of an aneurism of the right auricle, but because of the asynchronous pulsations of the heart and the tumor this was finally excluded.

Aneurism of the Ascending Aorta with Perforation Into the Superior Vena Cava.—Dr. V. Cominnoti, Triest (*Wiener Klinische Wochenschrift*, No. 36, 1901), reports a case of aneurism of the aorta presenting very unusual clinical features. Aside from the usual symptoms of thoracic aneurism, there were marked œdema and cyanosis of the head, neck, upper extremities and thorax. Here and there the veins formed small varicosities; the large superficial veins of the head, neck and thorax being greatly dilated and tortuous. The right jugular showed a positive venous pulse. An area of dullness extended from the middle of the clavicle to the fourth rib. This area of dullness would vary in extent from time to time, even within the course of a few hours. The œdema and the area of dullness seemed to go hand in hand, the one increasing as the other increased. The diagnosis offered was aneurism of the ascending aorta, with compression of the superior vena cava and perforation into same. The post-mortem revealed the correctness of the diagnosis. The perforation into the vena cava was suspected because of the periodical changes in the extent of the area of dullness, a harsh systolic venous-like murmur, tension of the venous system and the impossibility of relief through the collateral circulation, the development of varicosities on the thorax, positive venous pulse and the very rapid development of the trouble. Such cases have been very rare. The author was able to find but seven, though thirty cases are said to have been collected by Peffer and Griffith. An instructive statistical table is presented, together with a careful review of the symptoms of thoracic aortic aneurismata in general.

Observations in a Case of Aortic Aneurism.—Dr. Landgraf (*Berliner Klinische Wochenschrift*, No. 27, 1901), in the discussion of so-called cured cases of aneurism of the aorta, reports his observations of a case in which there was a total cessation of the clinical symptoms. In August, 1898, the examination of the patient revealed hoarseness due to paralysis of the left vocal cord, an area of

dullness over the sternum, over which pulsations were palpable, hypertrophy of the heart, a marked difference in the radial pulse of the two sides, dyspnœa, etc. Under the usual treatment the symptoms gradually abated; the dyspnœa ceased, the circulatory symptoms disappeared, the cardiac dullness became smaller, as also that over the manubrium sterni, the left vocal cord assumed the normal position, the voice became loud and clear; in fact, clinically the patient appeared in his normal condition. The radiograph showed the presence of a thoracic tumor which could only be interpreted as an aneurism of the thoracic aorta. In 1899 he had assumed command of his regiment and was in no way affected by the hardships of military life.

Collateral Arterial Circulation in Aortitis Deformans, Obliterating the Large Branches of the Arch of the Aorta.—Wilhelm Tuerk, Vienna (*Wiener Klinische Wochenschrift*, No. 32, 1901). — A patient, forty-four years old, with specific history, presented symptoms, referable to the chest, characteristic of aneurism of the aorta. The large arteries supplying the upper part of the body were practically pulseless; the right subclavian and carotid pulsating slightly, while in the left subclavian and carotid, and the radial and brachial of both sides, absolutely no pulsation could be felt. On the other hand, the abdominal aorta and the arteries of the lower extremities pulsated unusually hard. Inspection and palpation of the skin of the hips and back revealed a large number of pulsating tortuous vessels as large as goose quills, extending from below upward to the angle of the scapula, and then into the axilla. The flow of the current was from below upwards. The post-mortem verified the diagnosis, viz., obliteration of the branches of the arch of the aorta at the point of division, due to aortitis deformans and an aneurism of the aorta.

The collateral circulation took place through the iliac artery, the inferior and superficial epigastric, subclavian, etc., and was so complete that no functional disturbances arose in the upper part of the body. Death resulted from perforation of the aneurism into the œsophagus.

Aneurism of the Recurrens Type.—Préble, Chicago (*Medicine*, September, 1901).—"Aneurism of the recurrens type" is an expression adopted by Dieulafoy for those cases of aneurism involving, in some way, the left recurrent nerve. The anatomical relations of the aorta, the bronchi and the recurrent nerve are of great importance in this connection.

He reports two cases of this type of aneurism in which the pressure of the aneurism produced stenosis of the left bronchus. The respiratory movements of that side were lessened, the vocal fremitus, the respiratory murmur and voice sounds were reduced. The percussion note, however, was normal, and there were no murmurs over the left bronchus.

The subjective symptoms of the existing stenosis of the bronchus were paroxysms of coughing, dyspnœa and dysphagia.

A Dilated Superficial Vein with a Suggestive History.—Theodore Fisher, London (*The Lancet*, September 28, 1901).—At the age of one and a half years a child was seized with convulsions and remained unconscious for a week. There was no loss of power in either the arms or legs. The right leg and thigh became swollen, and there appeared on the abdomen a large dilated vein running upward from the center of the right groin to the costal margin. Here it divides into several branches, some of which reach nearly as high as the clavicle. This must have followed obstruction of the external or common iliac vein. The evidence of thrombosis of a vein within the abdomen following so shortly the cerebral symptoms suggests also thrombosis of some cerebral vessel. No hemiplegia was present, but this is not absolutely necessary. Thrombosis of a vein in the region of the motor area need not occasion hemipegia.

Concerning the Use of Subcutaneous Injections of Gelatine in Hemorrhage.—Dr. Grunow, Kiel (*Berliner Klinische Wochenschrift*, No. 32, 1901), has, since 1899, been investigating the efficacy of gelatine injections in various forms of internal hemorrhage. His material consisted of seven cases of pulmonary hemorrhage in phthisis and gangrene, eight of intestinal hemorrhage, seven of gastric hemorrhage, two renal hemorrhages, two from the bladder, and one aortic aneurism. 400 c.c. of the gelatine solution (2 g. gelatine to 100 c.c. physiological salt solution) was injected under the skin of the breast, abdomen or thigh. The thigh is preferable in most cases. In a majority of the cases there were very satisfactory results. In those cases in which the results were unsatisfactory, the gelatine was either employed too late or was not used in sufficient quantities. The best results were noted in those cases in which there was already a tendency to coagulation of the blood, as in the neighborhood of small bronchi, the pelvis of the kidney, etc. Its employment, however, is more or less indicated in all cases of internal hemorrhage.

The factors upon which the results depend largely—*i. e.*, those which affect the coagulation of the blood—are, with reference to pulmonary hemorrhage especially, the following: (1) coagulability of the blood itself; (2) the amount and rapidity with which the blood springs forth—this will depend upon the nature of the vessel, the size and form of the erosion and the blood pressure; (3) the size of the bronchus; (4) the tolerance of the bronchial mucous membrane for foreign bodies; (5) plethora of the bleeder; and (6) the contents of the bronchus.

Some of the accompanying results of the injections are: pain at the point of injection, fever, occasional eruptions resembling urticaria, and rarely a swelling in the muscle. The elevation of temperature occurs in almost all cases, but is not great, and is quickly relieved by discontinuing the injections.

The author concludes that: (1) he was convinced of the efficacy of gelatine injections in a number of his cases; (2) that while these injections are sometimes accompanied by unpleasant symptoms, these are not contra-indications to its use; (3) in view of the transitory coagulative action of the gelatine, he recommends in all cases of severe internal hemorrhage the employment of the gelatine injections for a period even after the hemorrhage has ceased; (4) sometimes this action of the gelatine is not alone sufficient to stop the bleeding: in these cases direct or indirect hæmostatics must be employed in conjunction with the gelatine.

The Employment of the Recuperative Power of the Heart as an Estimate of its Functional Ability.—Dr. Martin Mendelsohn, Berlin (*Philadelphia Medical Journal*, September 14, 1901).—Diagnosis begins to direct itself more and more toward ascertaining the altered functional power of an organ rather than its altered structure. The highest mission of clinical medicine is to preserve or increase the functional power of organs, since it cannot greatly influence tissue change. In the case of the heart we have little knowledge as to how far tissue changes influence the power of the heart. In order to enable a diseased heart to compensate properly, the physician must first be able to recognize and estimate its functional power. Various methods have been employed for this purpose, but have proven impractical. The author in describing the method that he has employed, emphasizes the fact that every organism is the better able to exert its functional power the more it is enabled to replace the material which has been consumed during its function. The two great conceptions of modern therapy, exercise and rest, have a far-reaching significance for this subject. The replenishment of consumed substances in the heart is performed during its periods of rest, the diastole. With the length of the diastole the opportunities for nourishing the heart increase. In order to employ for diagnostic purposes the sign of complete cardiac recuperation, which is the basis of the author's experiments, it is necessary to determine the absolute heart frequency uninfluenced by secondary

stimuli. This is best done in sleep, at any rate in the reclining position. The normal heart beat varies with the change of position. From the ratio between the heart beat in the vertical and horizontal position certain conclusions may be drawn as to the compensatory power of the heart. With the Gaertner's ergostats the relation of the heart beats to the amount of work done by an individual may be easily determined, and the length of time required for the heart to return to its normal condition fixed upon. Through thus testing the functional activity of the heart, the author claims to have simple and reliable means for observing and following up the compensatory and recuperative power of the heart.

Paroxysmal Tachycardia.—Rose, Strassburg (*Berliner Klinische Wochenschrift*, July 8 and 15, 1901).—The patient had been subject to attacks of pain in the stomach, vomiting, and palpitation of the heart. During his sojourn in the clinic he had three attacks of tachycardia, one lasting six or seven days, the other two about a half day. The frequency of the pulse varied from 212 to 260. There was no evidence of organic involvement of the heart, though the pulse was at times somewhat irregular. Neither percussion nor the Roentgen rays revealed any hypertrophy of the heart. Throughout these paroxysmal attacks the respiration remained regular and normal.

There was a pronounced polyuria immediately after the attacks. They were also accompanied by gastric symptoms, herpes labialis and areas of paresthesia.

The author considers the paroxysmal tachycardia in this case the expression of a neuropathic tendency. Drugs produced no effect in the amelioration of the attacks. Complete rest accomplished the best results.

Leucocyte Counts in Hemorrhage.—Head, Minneapolis (*Journal American Med. Assn.*, August 24, 1901).—Experiments upon dogs with reference to the effects of hemorrhage on the leucocytes and the duration of the leucocytosis led to the following conclusions: 1. A diminution in the number of white blood cells in the circulating blood immediately follows profound hemorrhage. 2. This initial leucopenia is followed sooner or later by an increase in the number of leucocytes in the circulating blood, so-called post-hemorrhagic leucocytosis. 3. The leucocytosis of hemorrhage continues for at least seven days, and in some cases much longer.

The Condition of the Blood in Scarlet Fever.—Percival Mackie, Bristol (*The Lancet*, August 24, 1901).—Blood examinations in twenty-five cases of scarlet fever enabled the author to reach the following conclusions: The red cells numbered between 3,500,000 and 4,000,000. The percentage of hemaglobin was in direct ratio to the number of red blood corpuscles. Leucocytosis was found in all cases, varying not with the temperature, but the severity of the throat lesions. In anginal cases the leucocytosis was very high. Leucocytosis began about twenty-four hours after the appearance of the rash. In some cases the leucocytosis decreased as the disease became more severe. This seems to be, as in pneumonia, an ominous sign. The leucocyte count in these cases is of greatest importance, giving not only some idea of the progress of the disease, but also an indication of septic complications. The author's observations agree with those of other authorities on the blood.

Report of a Case of Purpura Hemorrhagica.—A. Hymanson, New York City (*American Medicine*, August 31, 1901), reports of case of purpura hemorrhagica in which the initial symptoms were referable to the abdomen. The first symptoms were severe abdominal pains, repeated vomiting, a dozen or more bloody stools, a slight elevation of temperature, and a frequent pulse. These symp-

toms abated, and three days later an eruption appeared on the arms and legs, typical of purpura. Following this there were frequent attacks of severe abdominal pains, with collapse. These were supposedly due to pressure on nerve plexuses resulting from an internal hemorrhage. Dr. Jacobi thought the paroxysms due to pancreatic hemorrhages. The writer pleads for the administration of vegetable acids in the treatment of all varieties of purpura.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Black Vomit in Appendicitis. A Case in which Trauma was of Etiological Importance.—BOECKEL (*Gazette Medicale de Strassbourg*, June, 1901).—Twenty-four hours after a severe blow on the abdomen of a child suppurative appendicitis commenced. Five days later the child vomited a large amount of dark blood, in which was found a long worm. An operation was performed with satisfactory result. The author concludes that the worm had been driven from its resting-place in the appendix by the force of the blow, and had thus caused an erosion, from which the infection was set up.

The Mortality of Appendicitis.—DEAVER and ROSS (*Journal of the American Medical Association*, October 5, 1901).—These gentlemen give statistics which are replete with valuable information, founded as they are on the two hundred and sixty-eight appendicitis operations done at the German Hospital in Philadelphia during the year 1900. The mortality was 17.8 per cent. in all classes of cases, this including all who died of complications, etc. The causes of death in cases which are not operated upon are: peritonitis, obstruction, and the appearance of secondary foci in other parts of the body. Of the patients at hand, one hundred and twenty-four were operated for chronic disease in the interval, and of these only one died. There is a class of cases so "fulminant" that they will all die though operated upon within the first few hours after the attack, and in such cases a general peritonitis is found. It is advisable to remove the appendix where possible, because the individual is thus spared the dangers and discomforts of fecal fistula, secondary pockets, and subsequent attacks. A skilled surgeon can usually accomplish this delicate matter without endangering the patient. The intensity of the onset is a matter of the utmost importance if the surgeon would give a reliable prognosis in the fulminating cases. In chronic cases the attacks tend to become more and more severe as they recur. The case is one of particular gravity when the appendix points up behind the cæcum, for a collection of pus in this location may lead to interference with the blood supply of this large gut and necrosis. A collection in the female pelvis may, on the other hand, lead to lasting disease of the genital viscera. The typhoid germ is much more frequently the cause of the disease we are considering than is supposed; and typhoid fever, as such, does not preclude a successful operation.

Suppurative Pericarditis Following Appendicitis.—MANN (*Annals of Surgery*, October, 1901).—The author's case was not confirmed by operation, but it appeared clinically to be one of appendicitis. A girl twelve years old was taken with a severe abdominal attack on the 28th of February. After a few days her knee, ankle and wrist became the seat of what was taken for a severe mon-articular rhéumatism. On March 7th a mitral murmur appeared, and on the 10th collapse symptoms ensued, with difficult breathing and a great increase in the

precordial area of dullness. An aspiration of the pericardium was made, and on the appearance of pus the sack was widely opened and stitched to the skin. The little patient made a satisfactory recovery, which the surgeon considers due in great measure to the fact that no other germ beside the pneumococcus was found in the pus from the pericardium.

An Appendicitis Operation in the Interval—Entero-Anastomosis.—MARTIN (*Centralblatt fuer Chirurgie*, September 28, 1901).—This German author had a chronic case in which obstructive symptoms decidedly outweighed those of a focal nature; hence at the operation he found it practicable to direct his efforts above the seat of the inflammatory involvement, and to make a lateral anastomosis between the ileum and the cæcum. All the symptoms subsided in a short time, and the patient has as yet had no further trouble, although, as the author admits, the time is still too short for a definite prognosis as to the probability of future attacks of appendicitis.

Acute Tuberculous Peritonitis Simulating Appendicitis.—ROUSSEAU (*Gazette des Hopitaux*, September 24, 1901).—In the three cases mentioned the disease attacked individuals who were apparently in the enjoyment of perfect health. Still there had been suspicious symptoms, when the matter was sifted; one had had gastric manifestations, another pulmonary, and the third, intestinal disturbance. Still the serious trouble came in the form of a most acute and severe onset; there were the usual abdominal manifestations, especially pronounced around McBurney's point. There was low temperature but rapid pulse, and a tongue similar to that of typhoid. There are two kinds of these cases: those which simulate appendicitis with circumscribed peritonitis, and those which resemble the diffuse trouble which follows perforation. The diagnosis can only be made when a close study of the patient's previous history has been made. Prognosis in the two forms is about the same as in the two forms of appendicitis to which they are compared; most of those belonging to the lighter form recover, especially when surgical treatment has been instituted at the proper time.

Appendicitis and its Treatment.—A. J. OCHSNER (*Medical Standard*, August and September, 1901).—The author's paper is divided into two parts, the first treating of the palliative treatment, the second of the radical surgical treatment. The latter is along well-established lines, while the former contains much that is important but probably greatly neglected, by surgeons at least. It is well to know how to do an appendicitis operation, but it is certainly just as important that the surgeon should know when *not to operate;* this is what Ochsner gives us. He mentions the very high mortality in perforative and gangrenous cases operated upon after the first thirty-six hours; the per cent. increasing till the end of the third day, after which time all are lost. However, very many of these cases might be saved for a harmless interim operation, if only they were treated by the author's method of gastric lavage and rectal alimentation, no food by mouth and no cathartics.

Appendicitis and its Relation to Trauma.—SONNENBURG (*Deutsche Medicinische Wochenschrift*, September 19, 1901).—The author mentions the fact that Neuman, of Halle, says that trauma can never result in appendicitis provided the little organ be healthy; there must first be a stone present, and then a blow in the abdomen may cause some of the coats of the appendix to be ruptured, with a resulting infection. Neuman's remark is, however, misleading; for where a coprolith be present, we must presuppose a chronic inflammation; hence the sudden inflammation which follows a trauma in such a case can in reality be nothing more nor less than an acute exacerbation of a chronic morbid process, with which the injury had really nothing to do. The combination of trauma and

appendicitis must be a very rare one, and indeed Sonnenburg could trace such a connection in but twenty-two of the immense number of cases which have come under his observation. A few cases of medical jurisprudence have hinged on the point as to whether a blow can cause appendicitis, and in such cases the point has been very properly decided in the negative.

Appendicitis. Some General Remarks on the Pathology and Treatment. LLOYD (*Lancet*, September 21, 1901).—This article contains some very crude statements; in fact, it contains little that can be seriously taken, if one places any value on the opinions of our leading writers to-day. "The great majority of cases call for no operative treatment," is the striking remark which the author hurls at us. We can hardly expect much else from a man who in his next sentence writes of "an *anti*septic operation," in this day of asepsis. He would treat a pus cavity with a rubber tube (never mentioning a gauze pack) and sew up a great part of his incision. Our auther says further that "too early and too late an operation are to be condemned;" while he advises that all tubes and syringes used by the surgeon be rendered aseptic by the use of carbolic acid 1-20. The simple procedure of boiling these things seems never to have occurred to him. It is to be regretted that the writer of these antiquated notions did not give us some idea of his operative results. It is only natural to surmise that they would not look well on paper.

Surgical Treatment of Acute Appendicitis.—REHN (*Thirtieth Congress of the German Society of Surgery*, Berlin, April 13, 1901).—It must be noted that the infection of the appendix may come from the gut or through the blood, although the latter must be very rare. There can be no doubt that the affection is now much more common than formerly, and at the same time it seems, to Rehn, to be growing more virulent. Why should we hestitate to operate on a single pus cavity, in the fear of scattering infection, in view of the fact that we do not hesitate to grapple with general peritonitis? frequently with success. The ease with which we infect the general cavity seems to have been overestimated. This is then no cause for not doing an "early operation." No medical treatment can control the disease, as none can get at nor affect the process in the appendix. Prognosis in such cases is by no means certain; consequently we must embrace the surgical treatment if we would know and appreciate the true condition. Pain is somewhat of a guide to the severity of the attack; the pulse indicates the extent of peritoneal involvement; but temperature changes are no guide at all. In closing, Rehn is most emphatic in his admonition to operate in all cases as soon as the diagnosis can be made.

Some Unusual Features of Appendicitis and Their Treatment.—ERNEST LAPLACE (*Journal of the American Medical Association*, October 12, 1901).—Our author recites some unusual manifestations in appendicitis and the means which were used to combat them. In the first case the pain was all referred to the left side, but the surgeon was not deceived as to the nature of the malady, because the muscular rigidity was where one might expect, on the right. In the second case the symptoms were those of a retro-peritoneal solid tumor, but the incision revealed the whole matter to be an old pus collection which had originated from the appendix. Empyema of the gall-bladder was diagnosed and found in a third case, and by accident a gangrenous appendix was discovered, although no symptoms had attracted the attention of the observers to the spot before operation.

In case number four, the location of the tumor deceived the surgeon: here the affected area was confined to a radius of three inches around the umbilicus, but proved to be an appendicial abscess. It is supposed that contraction of the thickened omentum drew the attached tumor to its unusual situation. The author believes in continued flushing of the cavity, if general peritonitis be found.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

The Medicinal Treatment of Perityphlitis.—Bomget (*Therap. Monatshefte*, July, 1901, p. 340) protests against the exclusive employment of surgical measures in the treatment of appendicitis, and especially against the preliminary measures with which many surgeons meet the early symptoms of the disease, namely, the administration of opium and the application of ice to the abdomen. He urges rational medicinal treatment until subsidence of acute symptoms occurs, and advocates surgical interference only during the interval between attacks or in the event of suppuration.

Attacks of perityphlitis are always preceded by digestive disturbances of various sorts and various periods of duration, but the chief predisposing cause is constipation. For this reason the administration of opium is logically wrong. Although opium temporarily obviates the pain, it increases the constipation—the predisposing cause—and gives opportunity for further decomposition of the bowel contents. The aid in formation of adhesions, which is given by rest to the intestines by opium, is a negligible factor, for it is probable that ordinary rest in bed gives quite enough opportunity for such adhesions. The application of ice is also founded upon a misconception, for Lauder Bumton has shown that an ice-bag upon the surface of the abdomen of a rabbit markedly increases the intra-abdominal temperature instead of decreasing it, as such application does in superficial areas.

The method of treatment urged by Bomget is the following: The patient is placed upon liquid diet, and, if he has anorexia, upon simply weak tea containing a very small quantity of milk. Half an ounce of castor oil with some antiseptic (the author suggests salacetol, grs. xv.–xx.) is administered as soon as the patient is seen, and an attempt is made to empty the colon by a high enema, introducing a soft rectal tube for a distance of four to six inches, and injecting *very slowly*, at a temperature of 100° F., a quart of water to which has been added ichthyol 4 parts to 1000. With this water a definite quantity of finely divided olive oil is injected in order to soften the hardened fæces. The patient is placed on the right side, and the foot of the bed raised ten or twelve inches; as the fluid is injected, gentle massage is made from below upward along the course of the descending colon in order to aid the penetration of the fluid toward the cæcum. The fluid must be retained twenty to thirty minutes if possible, and the enema should be repeated twice a day as long as may be deemed necessary.

In the intervals between the enemata hot flaxseed poultices are applied to the right iliac fossa, and if the tumor be very prominent and painful, leeches may be tried.

After the second or third day the castor oil, which should have been given daily, may be replaced by a saline mixture of the following formula: Sodium bicarbonate, sodium phosphate, sodium sulphate, aa gm. 5.0, water 1000.0.; of this 150 c.c. are to be taken three or four times a day.

The remote danger of disturbing adhesions or of causing perforation of the gut by enemata is greatly overbalanced by the good derived from unloading the colon, and the improvement in the general condition and well-being of the patient. Pain and tenderness are reduced quite as much as by opium, and this reduction indicates an actual mitigation of the trouble, and not an apparent and only temporary relief. Moreover, toxic symptoms arising from decomposition in the colon disappear, and leave only those which are referable to the disease itself, the inflammatory and possible suppurative or gangrenous changes.

The Means of Arresting Acute Endocarditis.—Caton (*British Medical Journal*, October 12, 1901) describes a triple method of treating the endocarditis arising in the course of acute rheumatic fever, the general management of which has been the ordinary one of salicylates, light diet, strict confinement to bed, and flannel clothing. Considering a "change in the character of the first sound at the apex, a softening with loss of clearness, going on to the development of a bruit, . . . followed by accentuation of the first pulmonary sound" to indicate the commencement of valvulitis, he institutes the following treatment:

(1) Absolute rest in bed for six weeks, with the object of reducing the demands upon the heart to a minimum, lessening the force and velocity of the blood current and diminishing the pressure upon the softened valve cusps.

(2) Basing the next point in treatment upon the analogy of the effect of blisters on the joint condition in stimulating the vaso-motor and trophic nerves in the joint, small blisters of the size of a twenty-five cent piece are placed on the chest-wall between the clavicle and the nipple—that is, over the region supplied by the four upper dorsal nerves, which through the cord have an extensive communication with the sympathetic ganglia of the heart. A number of blisters are applied in succession, their efficiency being increased, if necessary, by covering them with small poultices.

(3) Sodium iodide is given internally for its reputed action in absorbing effusions.

The prognosis is better the earlier the treatment is instituted. The latter is useless if delayed beyond the second or third week. After apparent recovery the patient should avoid any muscular exertion for a period of two or three months.

The results of this method in ninety-two cases are as follows: Of sixty-one cases received with a distinct murmur, forty-one apparently recovered (lost murmur); of thirty-one cases in which the murmur developed while under observation, twenty-eight recovered.

The Therapeutics of Whooping-Cough.—Mays (*N. Y. Med. Jour.*, September 7, 1901).—On the assumption that whooping-cough is a spasmodic affection of the vagus nerves, and in conformity to his belief that disease of these nerves plays a large part in many diseases of the lungs, Dr. Mays suggests the use of counter-irritants over the course of the vagi, and finds in it the only promise of relief in the disease.

At the onset massage along the course of the vagi is performed for an hour or two each day. A more energetic measure is the application of a strip of mustard-plaster two inches wide over the same region several times a day until the full effect is obtained. Instead of this a mixture of equal parts of gum camphor, chloral hydrate and menthol may be painted over the skin, or tincture of iodine may be applied twice a day until irritation is produced. Finally, in stubborn cases, Mays injects five minims of a two and one-half per cent. solution of silver nitrate into the skin over the course of the vagus, preceding this injection by another of five minims of a two and one-half per cent. cocaine solution.

Acute Amygdalitis: Its Treatment by the Local Application of Tincture of Iodine.—Floersheim (*N. Y. Med. Jour.*, October 5, 1901), with an experience of sixty-eight cases, advocates this treatment in cases of tonsillitis with marked swelling of both tonsils and the surrounding structures and intense pain. The officinal tincture of iodine is applied to the tonsils, fauces, soft palate and pharynx with a well-saturated camel's-hair brush. The burning sensation following the application should be borne, if possible, for a minute or two, when it may be relieved by a gargle of warm water. If no burning is experienced, a second application may be made in a few minutes. The pain rapidly disappears under this treatment and the swelling and redness are reduced.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Negative Chemotaxis of the Leucocytes of Rabbits Infected with Pure Culture of the Chicken Cholera Bacillus.—ZILLEBERG and ZELIONEY (*Annales de l'Institut Pasteur*, August, 1901).—This excellent article containing the results of work on the phagocytes in their battles with pathogenic species of bacteria was written under the tutelage of Metchnikoff, and takes in the theory of Metchnikoff in regard to the phagocytic power of some of the leucocytes. It begins with a review of the literature on the subject. It may be stated that Metchnikoff in 1884 noticed that injection of anthrax vaccine into one ear of a rabbit produced phagocytosis at that place, while injection of virulent anthrax bacilli into the other ear was not followed by phagocytosis. Massart in 1892 introduced into the abdominal cavities of rabbits, guinea-pigs, etc., virulent cultures of anthrax bacilli, diphtheria and chicken cholera bacilli, and the organism of blue pus, also the vibrio Metchnikofi. In these experiments, *non-virulent* cultures attracted the leucocytes and gave rise to the phenomenon of phagocytosis, while *virulent* cultures did not do so. Bordet in 1896 (Recherches sur la Phagocytose, *Annales de l'Institut Pasteur*) studied the effects of injection of virulent cultures of the streptococcus into the abdominal cavities of rabbits and guinea-pigs. The leucocytes were not attracted, but a great number of streptococci were developed in the abdominal cavities in these cases. Those streptococci which developed in the animals and which did not come from artificial media attracted leucocytes, while the others which were introduced from without showed an areola around them (in the peritoneal exudate) which stained violet rose with Kuehne's blue. Marchand in 1898 also showed that leucocytes of the dog and guinea-pig destroy with great avidity non-virulent cultures of streptococci. Werigo (*Annales de l'Institut Pasteur*, 1894) concluded from numerous experiments that negative chemotaxis does not exist in warm-blooded animals. Tschistovitch (*Archives russes de Path. gen.*, 1900) failed to find negative chemotaxis by injection of virulent cultures of the streptococcus pyogenes into rabbits.

In view of the fact that the rabbit is very susceptible to the influence of the bacillus of chicken cholera, the present writers used this organism in their endeavor to ascertain the negative chemotaxis of the leucocytes of rabbits. Three rabbits were injected with this organism, killed within a few hours and their organs were fixed in sublimate solution, hardened in alcohol and stained by Nicolle's method. Marked phagocytosis was found. They also found that the bacillus quickly entered the liver and spleen after abdominal injection, and that in these sites there was always to be found a marked phagocytosis.

Further experiments were performed in order to prove that the absence of phagocytosis in the blood of rabbits in some cases is due to the poisoning of the leucocytes by the toxic products of the bacillus of chicken cholera. Artificial leucocytosis was produced in the abdominal cavity of rabbits, and then chicken cholera bacilli in virulent cultures were introduced. No phagocytosis was noted. Thereupon non-virulent cultures of the streptococcus pyogenes were introduced. Examination of the peritoneal exudate every fifteen minutes showed a marked phagocytosis with the streptococci, but none with the chicken cholera bacilli.

In order to prove that virulent cultures of chicken cholera bacilli contain many non-virulent forms, the following experiments were performed: a virulent culture from gelatin was injected into a rabbit which had been previously prepared by injection of a normal salt solution. No phagocytosis followed. The virulent culture was diluted five times and then injected, when phagocytosis was observed

in the peritoneal exudate. This made it apparent that there were some non-virulent forms in the apparently virulent culture, and that these non-virulent forms showed phagocytosis.

From the foregoing it can be seen that (1) after the injection under the skin or into the abdominal cavity of rabbits of a virulent gelatin culture of the chicken cholera bacillus, there is an absence of phagocytosis of the leucocytes towards these bacteria. (2) It is impossible to find phagocytosis after the injection of perfectly virulent cultures which have been previously developed in the peritoneal exudate of susceptible animals. (3) It is possible to explain the phagocytosis which follows upon the injection of practically virulent cultures of the chicken cholera bacillus into the skin, abdominal cavity or auricular veins of rabbits by the presence in these supposedly virulent cultures of some non-virulent elements. (4) The leucocytes of rabbits—an animal very susceptible to the chicken cholera bacillus—do not destroy virulent bacteria of this species during the course of the disease. This is an example of the absence of phagocytosis in the case of a mortal disease. (5) We can explain this absence of phagocytosis of the virulent chicken cholera bacilla, not by a poisoning of the leucocytes, but by their negative chemotaxic sensibility. The leucocytes of a rabbit infected with chicken cholera have the power up to the time of death, not only of distinguishing between the virulent chicken cholera bacilli and other non-virulent forms of other species, but also of picking out non-virulent elements from a virulent culture of the chicken cholera bacillus.

Does the Anthrax Bacillus Form Spores Under Strict Anærobic Conditions? SLUPSKI (*Centralblatt fuer Bakteriologie, Parasit. u. Inf. Krankheiten*, Bd. xxx., Hft. 10, September 30, 1901).—The paper deals with an attempt on the part of Slupski, a pupil of Pfeiffer of Koenigsberg, to prove that the anthrax bacillus does not form spores when subjected to strict anærobic conditions of development. In this connection he calls attention in the first place to the postulates of Koch issued some time ago anent the formation of spores by an organism, viz., a suitable nutrient medium, a certain temperature and free admission of the acidulous properties of atmospheric air. Since Koch made these postulates it has become known that the admission of air is not necessary for the production of spores. Klett claimed that spore formation can take place in the presence of hydrogen gas. Klett made his experiments in Buchner tubes from which he claims the air was completely exhausted by means of the contained pyrogallic acid and potassium hydrate. Pfeiffer was of the opinion that Klett's finding was the result of faulty technique—*i. e.*, that there was an incomplete exhaustion of air from the Buchner tubes. In order to be perfectly sure that all the air was removed from the apparatus in which his experiments were to be conducted, Slupski made use of an apparatus designed by Pfeiffer, it being quite an improvement over the Buchner tube for the cultivation of anærobic species. The apparatus might be compared to a large Petri dish containing another small dish in which distilled water was placed; over this dish another dish was placed, containing pyrogallic acid and potassium hydrate. Immediately over this was placed a triangle upon which rested the Petri dish proper, containing the cultures to be studied. The experiments were carried out in the most elaborate manner, cultures of tetanus and anthrax being used, with controls. The apparatus was doubly sealed with two layers of paraffin, thus effectually shutting out air. The whole apparatus, after being loaded with the cultures, was placed in the ice chest until the air contained was absorbed by the pyrogallic acid potassium hydrate mixture, and was then transferred to the incubator and watched for colony reproduction.

The results are divided up by Slupski into macroscopic and microscopic findings. (1) Macroscopic: the formation of a filmy growth on the anthrax plate was noted. A thin growth of the tetanus was noted. (2) Microscopic: Anthrax

bacilli grew in long threads, showing degeneration, many involution forms, but *no spores*. The tetanus plate showed mobile tetanus bacilli with beautiful end-spores. The research by Slupski thus demonstrates that *under severe anærobic conditions, spore formation of anthrax bacilli will not take place.*

Cholecystitis Typhosa with Bacillus Typhosus.—Brion (*Centralblatt f. Bakteriologie, Parasit. u. Infect. Krankheiten*, Bd. xxx., Heft 10, September 30, 1901).—The typhoid bacillus was found in pure culture in the gall bladder of a patient at autopsy twenty-two hours after death. The case was a relapsing form of typhoid fever, complicated with a cholecystitis. The typhoid bacillus was identified by cultural characteristics and by the agglutinating reaction with serum from a rabbit inoculated with the same bacillus found in the gall bladder and with the bacillus typhosus (stock culture) of the laboratory. The bacillus did not produce gas. Cases of cholecystitis produced by the bacillus typhosus have been previously reported by Ehret, Stolz and Hunner, but in the previously reported cases the agglutinating test as applied in this case was not always performed.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Heart and Pregnancy.—Fellner (*Monatschr. f. Geb. und Gyn.*, September, 1901) gives in this most elaborate paper the results of his personal experience in more than nine hundred deliveries, and of a study of the histories of five hundred and twenty confinements observed in Professor Schauta's clinic in Vienna, in one hundred and forty patients who suffered from a heart disease. Reflecting on all the different theories and teachings of many authorities, he arrives at the following interesting conclusions: The ventricles of the heart are, during pregnancy, mainly dilated and only slightly hypertrophied. The blood-pressure is, during pregnancy, usually somewhat increased. The blood-pressure reaches its highest point during a contraction of the uterus, and decreases during two labor pains. Immediately after the expulsion of the fœtus the pressure falls far under the normal. In operative confinements (forcèps, etc.) the pressure is increased during the tractions, the decrease after removal of the fœtus more sudden and larger than in spontaneous deliveries. Nursing of the baby produces a slight temporary increase of the blood-pressure. The decrease after confinement is due to the disburdening of the abdominal vessels, to the lessening of the intrauterine pressure, and to a stasis in the vessels of the lungs. A puerperal bradycardia is rare. During the puerperium the heart is too large for the reduced amount of blood, and, therefore, contracts slower. During parturition and the puerperium almost six-sevenths of the heart-failures are overlooked (most probably because they do not cause any disturbance). In all cases of incompensated heart-failure a necrotic zone is found along the margin of the placenta. In 20.2 per cent. of these cases the pregnancy does not reach the full term. The fœtal mortality is 25.5 per cent. The duration of confinement, especially of the third stage, is often increased. If proper treatment is applied the majority of these patients stand the strain of delivery without any harm, even without being aware that they have a heart-failure. In the nine hunhundred cases personally observed by the author, only 0.9 per cent. of the mothers in whom heart-failures were diagnosticated died after confinement. (The figures usually given are too high, on account of the great number of cases in which the diagnosis of the heart-failure has not been made. Thus the mortality, calculated

from the histories of 30,613 deliveries, as observed in Schauta's clinic during the last nine years, is 6.3 per cent.) If heart disease is complicated by tuberculosis or chronic nephritis, the prognosis is impaired. The stenosis of the mitral valves seems to be more dangerous than other *vitia*. On an average, however, only the degree of the heart-failure, and not its nature, determines the outcome. Only rarely a marked deteriorating effect of pregnancy upon a heart-failure can be observed. In compensated *vitia* the induction of premature birth or abortion is only permitted if the condition of the patient at the time of a previous confinement was very serious. In incompensated cases an immediate interruption of pregnancy is only allowed if an internal medication seems hopeless. Otherwise the latter should be tried first and the pregnancy interrupted when the general condition of the patient has improved. The best method of starting labor in cases of heart-failure is the introduction of a bougie. Rupture of the membranes is only indicated if the death of the mother is immediately to be expected, or if there is an œdema of the lungs. Cæsarean section is, in cases of incompensated heart-failure, very dangerous, because the combination of anesthesia with loss of blood, due to the operation, and the quick emptying of the uterus makes the decrease in the blood-pressure more sudden and larger than under normal conditions. Marriage should be prohibited in cases of mitral stenosis, of incompensated heart-failures, and when a vitium is complicated with tuberculosis or chronic nephritis. If a heart-failure becomes incompensated during pregnancy, coition should be prohibited. If the condition of the patient was very critical at the time of a previous confinement, prevention of pregnancy by operative means is justified.

Sudden Rupture of the Bladder Due to Continued Pressure Exerted by a Fibroma of the Uterus. General Peritonitis. Death.—M. MAILLAND (*Gazette des Hopitaux*, October 8, 1901).—A demented woman, forty years of age, is admitted to the hospital September 12, 1901. She is supposed to have met with an accident, the nature of which cannot be determined. A careful examination does not reveal any injury. Her condition, excepting the dementia, is about normal. No disturbance of urination. The following night the patient is very restless and the straight-jacket had to be used Evening of September 17th the patient becomes violent and it needs the help of several attendants to bring her back into her bed. Next day the temperature rises to 104°. Patient vomits; abdomen considerably extended; constipation; pulse small; patient urinates spontaneously; no blood in the urine. Diagnosis of peritonitis is made and laparotomy performed. Abdomen contains about two pints of a reddish fluid, no pus, peritoneum highly injected. No cause of the peritonitis can be detected. Death forty-eight hours after operation. Post-mortem: the uterus contains several myomas varying in size, some of them calcified. The posterior wall of the bladder is ruptured. The linear tear is transverse, about four centimeters long. Around the hole to the extent of about a dollar piece the wall is thinned like worn away by a continuous rubbing or friction. No other pathological condition in the bladder, the mucous membrane normal.

The writer suggests the following explanation for this unique condition: The demented patient never emptied her bladder completely; the half-filled organ was thus continually kept in intimate contact with the myomatous uterus. The constant pressure impaired the vitality of this portion of the bladder and reduced its resistibility. A comparatively insignificant traumatism was then sufficient to produce the rupture. The wearing away by friction of adjacent organs, as bladder, vagina, rectum, even of the abdominal wall, by myomas of the uterus, has been observed in several instances. Flemming and Lisfranc reported a case in which a uterine myoma had perforated into the bladder and formed there the nucleus for a stone. In a case of Demarquay a perforating submucous myoma produced a vesico-uterine fistula.

Tubal Gestation. Sac Entirely Anterior to the Uterus.—ALBAN H. G. DORAN (*London Lancet*, September 14, 1901).—In tubal gestation the sac in the earlier months of pregnancy nearly always fills the *cul-de-sac* and more or less of the lateral fornix on the side where it developed. Experience has shown that a tubal sac may be displaced so as to lie on the opposite side of the pelvis. A displacement, however, as found in Doran's case, is rare and of great interest from the standpoint of diagnosis. An oval mass of the size of a turkey's egg was felt, lying just in front of the uterus, turning backwards towards the right fornix; the left fornix was perfectly free. At the operation this tumor proved to be the left pregnant tube, bent round to the right.

A Case of Inoculation of an Adenocarcinoma into a Laparotomy Wound.—R. SCHAEFFER (*Zeitschr. f. Geb. und Gyn.*, vol. xlv., August, 1901).—The question of inoculation of carcinoma is of the greatest practical importance. While a few authorities positively deny the possibility of such an occurrence, others seem to be too enthusiastic in pronouncing that the majority of local recurrences of carcinoma are not metastases, but transmitted by inoculation. The number of observations which substantiate this mode of transmission of malignant growths is very small. The history of Schaeffer's instructive case is, in brief, the following:

"Both ovaries have been removed per laparotomy from a lady forty-eight years of age. Microscopical examination shows adenocarcinoma. Four years later a very hard tumor is found in the lower part of the abdominal scar, larger than a man's fist. The tumor is extirpated and proves to be also an adenocarcinoma."

The evidence of this tumor in the abdominal wall having originated by inoculation is, in Schaeffer's opinion, established by the following circumstances: The histological structure of this tumor is identical to that of the extirpated ovaries; the tumor is strictly limited to the abdominal wall, shows no connection with the abdominal cavity, the peritoneum being intact; there is no other metastasis; the inoculation can easily be explained in this case by the removal of the fragile and brittle ovarian tumors four years ago.

PEDIATRICS.

IN CHARGE OF

JOHN ZAHORSKY, M. D.

Tuberculosis of the Female Internal Genital Organs.—DUENAS (*Arch. Ped.*, October, 1901).—Medical literature is not very rich in observations on genital tuberculosis of female children. Eighteen well-defined cases are only known up to the present date. The case reported was a colored girl, eleven years old. Family history unimportant. The patient had measles, which was followed by an irregular fever and diarrhœa. Abdominal pains were present. The abdomen gradually enlarged; considerable ascitic fluid was demonstrable. Repeated puncturing, blistering, and the internal administration of tonics and iodides failed to relieve the condition.

Laparotomy was performed. Tubercles were found scattered over the intestines. Both ovaries were tuberculous. Tubercles were scattered over the right fallopian tube.

An Analysis of Thirty-two Cases of Congenital Heart Disease.—MORSE (*Arch. Ped.*, October, 1901).—In forty-four per cent. the cardiac condition was discovered during a routine physical examination. Cyanosis was the most common symptom. It was absent in eight cases. In four the cyanosis disappeared after four days, fifteen days, one year, and one and one-half years. The phys-

ical signs varied. In two cases diagnosed as patent foramen ovale, nothing abnormal was detected. In four others a murmur was heard. In six cases diagnosed as deficient interventricular septum, the cardiac area was increased. Enlargement of the right side of the heart was found in pulmonary stenosis. The extremities were clubbed in but six. Clubbing of the extremities and enlargement of the liver and spleen were common in supposed lesions of the pulmonary orifice. In two cases the murmur disappeared. The recovery from lesions which, from physical examination, were apparently the same as those in cases which resulted fatally.

Heart Failure from Insignificant Superficial Ulcerative Processes. — ZUPPINGER (*Wien. Klin. Wochenschrift*, August 22, 1901).—Symptoms of cardiac failure and death resulted from very insignificant superficial ulcerative processes. The patients were infants, aged three, one and three years, respectively. The lesions were a phlegmon of the foot, ulceration in the groin, and cervical suppurative adenitis. Pronounced myocarditis and nephritis were found at the autopsy. The heart failure was indicated by pallor, weakness, breathlessness, and rapid, feeble pulse. No other symptoms of septic intoxication were present.

Treatment of La Grippe in Children.—CHAPMAN (*Brooklyn Med. Jour.*, October, 1901).—The temperature, if high, should be reduced by sponging. The coal-tar antipyretics should not be used. They are cell-destroyers. The low arterial tension contraindicates veratrum viride and aconite. Prostration should be met by stimulants, such as whisky, strychnia and digitalis. Quinine, camphor, caffein and Russian musk are recommended.

For coryza with frontal headache, warm poultices of poppy-heads or chamomile flowers, placed over the nose and frontal sinuses, give relief. Steaming with tincture benzoin comp., oil of eucalyptus, menthol and thymol is useful in marked congestion of the air passages. Counter-irritation benefits bronchitis.

For nervous symptoms, nothing seems more efficient than external heat.

Use as little medication as possible, and trust mainly to careful nursing.

The Cure of Enuresis.—BARBOUR (*Ther. Gaz.*, September 15, 1901).—The great frequency of enuresis, and the absence of any determinable cause in most cases, have led us to infer that the most frequent cause has not been ascertained, and especially that it is not a neurosis only. The inefficiency of the usual treatment in ameliorating this common disease has led many to strive in an empyric way to secure some more brilliant and certain results than have obtained under any of the drugs which have been advocated for it.

The writer's experience with belladonna has not been favorable. Strychnine is indicated in those cases in which there is a general relaxed condition of the muscles. Iron is valuable in anemia.

The writer has obtained the best results from the internal administration of boric acid and salol. The results from this treatment have been uniformly good. The boric acid renders the urine acid. The salol is given to make it antiseptic.

The Value of Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.—THURSFIELD (*Ped.*, October 15, 1901).—The writer believes that the test is even of greater value in children than in adults. Previous attacks of typhoid can usually be excluded. The reaction occurs earlier in children. In one hundred cases examined, the reaction was positive in forty-two. Most of these gave the reaction as soon as admitted to the hospital.

In children's disease, a positive Widal reaction is trustworthy evidence of the presence of typhoid fever. A negative reaction after the tenth day of an illness is strong, but not absolutely convincing, evidence of the absence of typhoid fever. Repeated negative reactions are trustworthy evidence that the case is not typhoid fever.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Tumor (Neuroglioma) of the Superior Worm of the Cerebellum, With Corpora Quadrigeminal Symptoms.—HERMON C. GORDINIER (*Jour. Nervous and Mental Diseases*, October, 1901).—A case presenting the following general and local symptoms: Man, aged twenty-one, wagonmaker. Double optic neuritis, passing on to atrophy, intense and continuous headache, vomiting, dizziness, slow cerebration, and gradual loss of memory. The focal symptoms were an ophthalmoplegia interna, with a double incomplete external ophthalmoplegia, a marked cerebellar gait, coarse tremor of the hand and ataxia in the left leg. According to Nothnagel, the following group of symptoms may be relied upon in localizing a tumor in the region of the corpora quadrigemina: First, an uncertain, unsteady gait, like that of a drunken man, especially if the gait is the first symptom; second, a double ophthalmoplegia, not entirely symmetrical and not involving all the muscles in an equal degree, with an especial predilection for the superior and inferior recti muscles; third, all other symptoms are subsidiary and of minor importance. Autopsy showed a growth projecting from the superior worm of the cerebellum. It was irregularly quadrilateral in shape. It measured 4x3x2½ cm. In its forward growth, the tumor had involved by actual ingrowth the posterior corpus quadrigemina of each side. The anterior quadrigeminal body and the optic thalami did not appear to be affected. Histological study showed the tumor to be a neuroglioma. Although the case here reported presented the typical symptom-complex outlined by Nothnagel as being diagnostic of tumors having their primary seat in the corpora quadrigeminal region, the autopsy showed the growth to be located primarily in the cerebellum, and to have involved secondarily these bodies, together with the adjoining tegmental region.

Peripheral Nervous Symptoms in Pulmonary Tuberculosis.—M. G. CARRIERE (*Gazette des Hopitaux*, September 21, 1901).—Peripheral nervous symptoms in the course of a pulmonary tuberculosis are more common than is generally supposed. They are more frequently found in men than in women. As predisposing causes may be mentioned overexertion, exposure to cold, and alcoholism. They are practically never found excepting in cases of pulmonary tuberculosis, and generally in the third stage. No cases of peripheral neuritis have been reported in extra-pulmonary tuberculosis. The slow progressive type of phthisis predisposes to the development of peripheral nerve manifestations. In very many cases there is a history of alcoholism, and for this reason many cases found in literature are open to the criticism of a mistake in diagnosis, the active causative agent being alcohol and not tuberculosis. The most common symptom is a wasting of the muscles. Complete paralysis is rare. Tremor is a common symptom. The mechanical hyper-excitability of the muscles is a very suggestive symptom. Electrical changes, with the reaction of degeneration, are a constant finding, and were demonstrated by the author in all cases where, upon post-mortem examination, the existence of a neuritis was found. Sensory symptoms are more frequent than motor, and are found especially in women and in young subjects. Neuralgias were present in three-fourths of the cases reported in this article. Muscular hyperesthesia is frequent and anesthesia less so. Microscopic examination of the central nervous system of cases in which during life neuritis existed can be divided into two classes: First, those in which no appreciable lesion was discovered, about fifty per cent. of the cases; second, central lesions, cellular changes in the cord and changes in the peripheral nerves and muscles in

half of the cases. The symptoms may have the following three sources of origin: First, certain of them are of an hysterical nature, not corresponding to any anatomical lesion whatever; second, others are due to alterations of the central neurones; third, others still are due to a peripheral neuritis

The Application of Hypnotism in the Education of Vicious and Degenerate Children.—BERILLON (*Gazette des Hopitaux*, October 1, 1901).—According to Berillon, hypnotism should have a well-recognized place in the pedagogics of children of vicious habits, and who cannot be reached by ordinary educational methods. In the following conditions success is habitually attained: First, kleptomania; second, onanism; third, moral perverseness; fourth, onychophagia. Hypnotism should always be employed by or under the direction of a skilled physician, one who has made a special study of, and who has a special aptitude for, inducing hypnotic trance. The method is not applicable to idiots, imbeciles, or to subjects mentally feeble. Its efficiency is in proportion to the degree of mental development of the children. Instinctive and automatic impulses, which disappear readily in normal individuals under the influence of education, show great stubbornness in degenerates. In such cases suggestion in the waking stage has practically no influence, but suggestion made in the hypnotic state acquires a remarkable effect. The cures obtained by this means have shown themselves to be permanent, and no untoward effects have followed the application of hypnotism to children.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Malarial Nephritis.—EWING (*A. J. Med. Science*, October, 1901).—While acute malarial nephritis is almost never immediately fatal, from the microscopic findings in the urine, and the clinical symptoms, it appears certain that in some cases a true exudative nephritis may occur dependent upon the malarial toxin. Previous findings have demonstrated the freedom of the kidney from localization of the parasites, and this has been attributed to its rapid circulation. The author's experience in fourteen cases bears out the freedom of the kidney from numerous parasites, but he reports a case with a fatal termination, which demonstrates that in malarial nephritis there may be a great massing of the parasites in the renal capillaries. In this case, the microscopic finding showed the lining cells of the tubules to be destroyed by extreme swelling and degeneration. The small cortical vessels were almost invariably collapsed, giving a whitish appearance to the organ in gross. In the medulla, most of the capillaries were filled, and many distended, with infected red cells and pigmented parasites. Many of the distended capillaries were ruptured. The numbers and compact massing of the parasites were similar to what occurred in like cases in which the parasites were massed in the brain, heart muscle, and bone marrow. Coarsely granular casts, sometimes entangling infected red cells and pigmented leucocytes were noted. The marked degeneration of the cortical tubules is attributed to the many parasites acting principally through obstruction of the circulation in the organ.

This form of malarial nephritis may probably be diagnosed by the presence of infected red cells in the urine, both free and adherent to casts, together with other microscopic evidences of acute nephritis.

Rapid arterial circulation and active phagocytic power seem to be the only

two factors which preserve a tissue from occasional overwhelming growth of the æstimo-autumnal parasite.

Thus three main types of acute renal lesions of malarial origin occur:

1. Acute degeneration of toxic origin, reaching a degree in which exudation of blood serum into the tubules is added.

2. An extreme form of acute degeneration of hæmoglobinuric origin.

3. Massing of parasites in the renal capillaries with extreme degeneration of the parenchyma cells, multiple hemorrhages, and exudation of blood serum into tubules.

Transplantation of Ureter.—SMITH (*Phil. Med. J.*, October 19, 1901).—A uretero-vaginal fistula was produced in a woman, thirty-two years of age, during a difficult forceps delivery. Later the vagina was much reduced in size by cicatricial tissue, presenting a cone-shaped appearance, with the apex at the point of the fistula, and constant contact of the urine with its walls produced an excoriated and ulcerated condition. Thirteen months after the delivery, two attempts to relieve the condition by plastic operation, at St. Bartholomew's Hospital, London, failed. Eighteen months later the patient applied to the author for treatment. After satisfying himself that the fistula was not merely vesico-vaginal, but uretero-vaginal, he attempted on two occasions to close it through the vagina. Having failed in each to get union, the seriousness of the case justified the more grave procedure of transplantation. After a previous administration of urotropine to sterilize the urine, he began operation by an incision through the abdominal wall down to the peritoneum, extending from the symphysis to the umbilicus, and endeavored to secure the ureter without opening the peritoneum.

But failing to complete the operation in this way, he made a small slit in the peritoneum, and easily picked up the ureter. He now ligated its distal end and severed it one inch from the bladder, because of the dense cicatricial tissue surrounding it. The ureter was split for one-third inch to prevent after stricture. An oblique slit was made in the right upper corner of the bladder, and the ureter stitched in, mucous membrane to mucous membrane, with fine chromacised catgut, and the fibrous coat of the ureter to the muscular wall of the bladder, with six fine black silk sutures, Van Hook's method being employed. Distention of the bladder with a pint of weak methyl blue solution showed no leakage. The slit in the peritoneum was closed with catgut, and the wound drained with a tube and a small piece of gauze. *Catheter a demeure* remained for five days. Eleven days after the operation, the patient held her urine for eight hours, and had gained in health and strength.

The ureter should never be implanted into the bowel, neither should it be tied to cause hydronephrosis. In view of the excellent results in transplantation, nephrectomy becomes a last resort hardly justifiable.

Movable Kidney.—WATSON (*Boston Med. and Surgical J.*, September 19, 1901).—Watson enters a protest against the current attitude of medical men as to operation upon movable kidney. They hold that it is unjustifiable because of the likelihood of recurrence of the mobility, and the failure of the operation to relieve symptoms, especially in neurasthenics; and, further, because most neurasthenics (about 80 per cent.) show some signs of movable kidney, and that little or no damage comes to the kidney.

While it is true that this condition does occur in many neurasthenics, in most instances it not being productive of serious injury, and that the symptoms referred to the kidney by the patient are not due to abnormal mobility, but are neurasthenic in character; yet sometimes neurasthenia is dependent upon the mobility, and serious consequences may result to the organ, such as hydronephrosis, pyonephrosis, fixation in an abnormal position, and, rarely, gangrene of the organ.

Numerous cases are quoted in support of this position. The author operated upon two cases in which the kidney, having previously been movable, was found to be firmly fixed by adhesions of inflammatory origin at and below the brim of the pelvis, causing paroxysms of severe pain. Morris reports a similar case. Out of the author's six cases of nephropexy, in one no relief was obtained; in one other conditions made judgment doubtful; the four other cases remained wholly cured. After a thorough discussion of the ætiological factors of the mobility and the various attachments and supports of the kidney, he concludes that the perirenal fascia with its attachment to the tunica propria of the kidney on the one side, and to the parietal peritoneum and fascia covering the lumbar muscles on the other, together with its strong connection with the diaphragm above, and in some cases the supporting interlacing fibers below the kidney, constitutes the most essential factor in the retention of the kidney within its natural position and sphere of motion.

The chief element in normal fixation can hardly be ascribed to the shape and size of the paravertebral fossæ, in which the kidneys lie beneath the diaphragm, because the normal motion of the kidney brings its lower pole beyond the limits of the lower boundary of the paravertebral fossa. He has observed the mechanism of the movable kidney in six subjects post-mortem. In one subject, in the upright position, the kidney would descend until the lower extremity caught on a band, which held it, while the upper pole fell forwards, thus kinking the ureter. In the recumbent position the kidney resumed its normal position.

Thorndike saw, *in vivo*, a kidney which, having been previously operated upon, adhered only at its lower pole, where the stitches had been inserted. Its upper portion would fall forward, while the lower was held fixed, so that it twisted the ureter and caused severe pain. This was clearly demonstrated at the second operation, which relieved the condition.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Report on the Histo-Pathology of Two Cases of Cutaneous Tuberculides in One of Which Tubercle Bacilli Were Found.—J. M. H. Macleod, M. D., M. R. C. P., and O. S. Ormsby, M. D. (*British Jour. of Dermatology*, October, 1901).—The first case, a woman of twenty-five years, came for the treatment of acneiform tuberculides of the extensor aspects on both legs and below the knees. There was no history of tuberculosis in the family. Past history fairly good until five years ago, when this eruption occurred with months of almost complete remissions.

The second case, a boy of seventeen years, was suffering with various skin manifestations associated with tuberculous lesions elsewhere. Father and mother of the boy were healthy and well. Both grandfathers died of tuberculosis, also a maternal aunt. Patient had never been strong, and upon examination was seen to be delicate and poorly nourished. The left hand presented the appearance of dactylitis. Physical signs were negative. There was a suspicious evening rise of temperature, a chronic cough, and night-sweats. Lesions of lichen urticatus were noticed on the trunk. On the legs and below the knees were several deeply-seated lesions the size of a pea to large filbert, the older ones having a bluish-red tinge. One had been pricked and poulticed and had broken down and discharged. The others were intact; one of these was excised for examination.

After a careful histologic study the authors arrive at the following general conclusions: "In the second of the two cases we had the combination of tuberculous clinical appearances (dactylitis) and a tuberculous family history, with a tuberculous histological architecture and the presence of tubercle bacilli, which proves beyond doubt that the cutaneous lesions were the result of the reaction of the tissue to the invasion of the tubercle bacillus. In the first case we had an almost identical histological structure, as a reference to the *resume* of cases will emphasize, and although in this case we were unable to demonstrate the bacillus, the similarity of the histological architecture left little doubt that, like the former case, it also was tuberculous. Indeed, in the hundred and twenty sections we stained for tubercle bacilli, from the similar tuberculous appearance presented by both sets of sections, we thought that we were as likely to find tubercle bacilli in one case as in the other.

"The second striking picture brought out by this report was the condition of the hypodermal vessels. Though several writers have noted changes in those vessels, many others have failed to do so, because they have too often examined the skin alone without cutting sufficiently deep to include the hypoderm in the excision. The *initial* changes in both our cases occurred in the vessels of the hypoderm, and more especially in the veins, where endophlebitis and a general thickening of the walls was usually present. It would have been of particular interest to us if we had succeeded in demonstrating the bacillus within the veins themselves, but as yet we have been unsuccessful in doing so."

Ringworm and Favus.—A. D. Mewborn, M. D. (*Pediatrics*, vol. xii., No. 7).—The author in this interesting article discusses the necessity of a ringworm school in New York, where the disease is quite prevalent. He thinks this could be accomplished, and describes in detail the "Ecole Lailler" founded by Sabouraud in 1895 in Paris in the northwestern end of the St. Louis Hospital reservation. This school or institution is for the study and treatment of ringworm and favus cases. These infected children are not only treated, but are taught as in a private school. Outside of their school hours each child has a weekly *seance* with the epilators, of whom there are sixteen. All of the diseased hairs are epilated, as well as a margin of one or two centimeters of healthy hairs around each patch. The rest of the scalp is shaved and rubbed with a solution of tr. iodine, iodide potash and glycerine, and a white cap tied on for protection. Once a week each child must pass under inspection before Dr. Sabouraud or his assistant, when the application of croton oil on a tooth-pick mop is made to the diseased follicles. Three or four months is the average time for cure. Untreated cases may last for five years, and favus ten to twenty years.

Seborrhœa.—Taken from the remarks made by M. Sabouraud before the Dermatological Section of the Sixty-ninth Annual Meeting of the British Medical Association (*British Jour. of Dermatology*, October, 1901).—Pincus, Pifford, Van Harlingen and Unna have shown that the scale of pityriasis did not come from the depth of the sebaceous follicle, as Hebra had said, but was produced by the exfoliation of the superficial horny epidermis, therefore it is necessary to separate pityriasis essentially from seborrhœa. Pityriasis has a specific cause, a microbic flora, a gray cultured coccus (morococcus of Unna) and the bottle bacillus. This may exist without true seborrhœa, and when in connection with the latter is by superposition of the two diseases. Seborrhœa is merely a hypersecretion of the sebaceous glands and nothing more, being exclusively fatty and never scaly. It exists in two forms: a moist type, the seborrhœa oleosa of Hebra; and a cystic type, acne comedo or acne punctata, of all authors. The elementary lesion is a fatty plug, which oozes from the sebaceous follicle when a seborrhœic skin is squeezed. In this fatty plug an enormous number of very small bacilli exist in pure culture.

The second element of seborrhœa, the comedo, which is the cystic formation of the former plug, which becomes infected sooner or later by the common cocci of the skin (the most frequent infective agent being the gray coccus), thus bringing about the various varieties of polymorphic acne. If infected by virulent cocci (staphl. pyog. aureus), there may ensue the clinical forms called acne necrotica, varioliformis, acneic furunculosis of the neck, etc. Thus we see from seborrhœa we have the various forms of acne, due to the infection of the seborrhœic skin by micro-organisms (the micro-bacillus, morococcus, staphylococcus, etc.). The seborrhœic condition furnishing the soil for their propagation. These diseases occur most frequently during sexual development, the time of the most frequent occurrence of true seborrhœa (hypersecretion of the sebaceous glands). Dr. Sabourand goes on to say the term "seborrhœic eczema" of Unna signifies a hybrid mixture of pityriasis and true seborrhœa, which generally co-exist on the same individual.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

A Practitioner's Treatment of Inflammatory and Ulcerative Conditions of the Larynx.—Beaman Douglass (*Post-Graduate*, June, 1901) briefly describes and outlines the general treatment of all inflammatory diseases of the larynx. In acute laryngitis he recommends the following as a quick cure: The patient should be kept in a well-ventilated room at a temperature of 67 to 70 degrees Fahrenheit. Bodily massage given twice daily. The bowels freely moved. The voice rested. The internal administration of 1-20 gr. of tartar emetic every hour until nausea is produced, and a spray of a six per cent. solution of suprarenal gland locally into the larynx.

In croup, inhalations of steam containing menthol or camphor, rubbing the nose, neck and chest with a mixture of turpentine and camphorated oil, and the internal administration of calomel 1-10 gr. every hour for ten doses.

In œdema of the larynx, ice applications, free movement of the bowels and hot foot bath, with local application of suprarenal gland.

Chronic laryngitis yields only after protracted treatment. Any abnormality of the nose and pharynx should receive attention. Locally sprays or injections of solutions of sulphate of zinc or silver nitrate, 5, 10, 15 grains to the ounce.

Tubercular laryngitis is divided into three stages: Beginning cases, which are treated the same as cases of chronic laryngitis; infiltrated cases, in which hypodermic injections of oil of hydrocarbol are made into the infiltrated tissues; and ulcerated cases, in which the ulcers are cauterized either with nitrate of silver in substance or strong solutions of lactic acid.

Specific cases are dealt with along the line of the well-known orthodox treatment.

On the Removal of Tonsils in Adults.—J. Lambert Lack (*British Medical Journal*, September 28, 1901) calls attention to the danger which may follow the removal of tonsils in adults, and briefly describes the methods of removal, with their indications. Besides the danger attending all open wounds, tonsillotomy in the adult may be followed by severe hemorrhage which may menace the life of the patient. Another risk attending the operation is the effect it may have upon the voice. Singers sometimes entirely lose their singing voice, public speakers and teachers find they are unable to speak so well or so long as before the opera-

tion, and frequently complain of a hitherto unknown aching feeling in the throat. The methods of removal are:

(1) Removal by ignipuncture with the electric cautery, which is suitable for cases of much enlarged tonsils when removal is not necessitated by recurring attacks of tonsillitis and complete removal is not desirable for fear of injuring the singing voice. Under cocain anesthesia three or four punctures are made in each tonsil, repeated on three or four occasions with a week's interval between each.

(2) Tonsillotomy should never be performed in adults with very large tonsils, because of the danger of hemorrhage, which occurs as often as one out of every three or four cases. In cases with frequent attacks of tonsillitis when the tonsil is too small to be snared it may be removed by cutting instruments.

(3) Removal with the cautery snare leaves a large charred wound in the throat, with increased danger of infection and secondary hemorrhage.

(4) Removal with the cold wire snare is the only method applicable to cases of much enlarged tonsils, possessing great advantages over all other means. The removal is more complete, and if the snare be tightened slowly all immediate bleeding is prevented, and there is but slight danger of secondary hemorrhage. Though painful, it is easily borne under cocaine anesthesia.

(5) Enucleation by incision through the mucous membrane between the anterior pillars of the fauces and the anterior border of the tonsils, through which the finger or blunt instrument is introduced and the tonsil shelled out of its bed, care should be taken to keep outside of the tonsil capsule. This is but loosely attached to the surrounding areolar tissue. General anesthesia is advisable. The advantages of this method are the complete removal of the tonsil, a point of importance in cases of frequently recurring attacks of tonsillitis, in some cases of flat tonsils it being the only practical method.

In conclusion he urges that no routine method be adopted in dealing with tonsils in adults.

Acute Amygdalitis: Its Treatment by the Local Application of the Tincture of Iodine.—S. Floersheim (*New York Medical Journal*, October 5, 1901) gives an account of the marvelous results he has had in the treatment of acute catarrhal and follicular amygdalitis with the tincture of iodine.

Sixty-eight cases in all were treated with good results. The method used was simply to saturate a long camel's-hair brush with the tincture of iodine and rapidly brush over the inflamed area. Should the burning pain which usually follows last longer than a few minutes, a gargle of plain water is given and the pain soon subsides. A second application is then made. If after twenty-four hours there had been no marked improvement, another application was made, but in many cases one treatment was all that was required.

Recurrent Papillomata of the Larynx in an Adult Treated Locally by Formalin.—Adolph Bronner (*British Medical Journal*, September 28, 1901) reports a case of recurrent papillomata of the larynx in a man of forty-five, in which he had removed the growths four different times during a period of three years, recurring each time, until he began to spray the larynx with a solution of formalin, at first 1-1000, then up to 1-100. There has been no recurrence of the growths during the past two years.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, Jr., M. D.

Concerning the Treatment of the Apparently Unaffected, or at Most But Slightly Involved, Eye in Cases of Glaucoma.—G. E. De Schweinitz (*Phil. Med. Jour.*, September 21, 1901).—In a very suggestive paper De Schweinitz reviews the possibilities of management of the unaffected or slightly involved eye in the four varieties of primary glaucoma—*e. g.*, acute, chronic congestive, chronic non-inflammatory (simple), and absolute glaucoma.

In general, operative treatment (iridectomy) is advocated as giving the "best and most permanent results in the treatment of glaucoma." The acute, chronic congestive and chronic non-inflammatory types should be clearly differentiated in order that appropriate therapeutic measures may be instituted. The danger of procrastination in the operation of glaucomas amenable to iridectomy or sclerotomy is insisted upon. The dictum of Rochon-Duvignaud—"the excretory angle of the eye (iritic angle) is intact at the time of the first attack of glaucoma, but is obliterated at a more advanced period of the affection. Iridectomy will be efficacious *before the root of the iris is welded to the cornea; otherwise not*"—is accepted as a clear exposition of the probable permanent result of iridectomy in any given condition of glaucoma.

With rare exceptions, all forms of glaucoma are bilateral. In certain cases, however, a very long period (from one to ten years) may intervene the attacks in the two eyes. Very rarely the disease may be truly monolateral (glaucoma simplex, glaucoma absolutum). The following questions are propounded:

1. *What shall be done for the apparently sound eye after the first eye has been operated on for acute glaucoma?* As the operation not unusually precipitates an attack of acute glaucoma in the fellow eye, a good rule . . . . . is to keep the non-affected eye under the influence of a myotic until the eye upon which an operation has been performed is entirely healed and free from irritation." The following signs have been suggested as a means of determining whether the apparently sound eye is in reality in the beginning of glaucoma:

(*a*) "Shallowness of the anterior chamber and beginning opacity in the lens with swelling and a high degree of hypermetropia and smallness of the corneal diameter."

(*b*) "The mydriatic test . . . . . consists of the instillation of a solution of homatropine into an eye that is under suspicion, and noting whether it produces any rise in intraocular tension, or pulsation of the blood vessels of the fundus."

(*c*) "The palpation—that is, an observation is made whether finger-pressure on the globe so slight that in a healthy eye it does not cause pulsation of the blood vessels of the fundus does cause them to pulsate in the eye under suspicion."

(*d*) "The history of prodromal glaucomatous phenomena."

If these tests are positive, "an iridectomy should be performed . . . . . as soon as the anterior chamber is restored upon the opposite side."

2. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic glaucoma?* A case of chronic congestive glaucoma approaching in type a glaucoma simplex is described: In January, '96, male, age 42, began to see "rainbow rings" around artificial lights with right eye. Fundus normal, fields of normal dimensions. Close work for long periods was forbidden and he was given a solution of eserin to use in case the signs of acute glaucoma appeared. In fall of 1896, "rainbows" had increased in frequency and were more per-

sistent. V. normal on clear days. Field normal. T + (?). Ophthalmoscope showed central cupping of nerve-head. In June, 1898, the conditions had not changed.

The patient absented himself until February, 1901, when right eye V. = .2. T + 1. Nasal field lost. "Rainbow" rings had begun to be noticed before the left eye. Vision and field normal. In May, 1901, right eye showed almost complete loss of nasal and lower field, with a semicircular scotoma. Left eye showed beginning contraction of field, particularly on the nasal approach.

In such a condition iridectomy "would seem to be indicated as soon as the 'rainbow' vision was certainly associated with the attacks of increased intraocular tension" in order to "prevent the decided change from the prodromal to the more fully developed glaucomatous stage."

3. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic simple glaucoma?* Most cases of glaucoma simplex are bilateral from the start; rarely, however, one eye is markedly glaucomatous, where the other, although exhibiting a glaucomatous excavation of the nerve-head, still retains normal central and peripheral vision. Very careful perimetric examination of these cases will often reveal a nearly central scotoma which has a tendency to become annular, as well as a very slight nasal contraction. The writer believes iridectomy may, under these circumstances, properly be urged.

Beginning cupping on the temporal side of the disk, periods of increased intraocular tension and alteration in the visual fields are signs indicative of the beginning of trouble in the fellow eye. The search for scotomata should be diligent, as their study furnishes a prognostic guide of value. (*a*) The yare topographically different from those which occur in simple atrophy. (*b*) They are often the forerunners of subsequent defects in the peripheral visual field.

4. In the presence of absolute glaucoma of one eye the writer accepts the dictum of Fukala, who says: "In case the glaucoma of the first eye is already absolute, one should perform an iridectomy upon the second eye before the outbreak of the disease, at least when the suspicion that there will be an outbreak exists."

BOOK REVIEWS.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, M. D., LL. D. Fourth edition. D. Appleton & Co., 1901.

The fourth edition of this excellent and popular treatise brings the text thoroughly up to date, and embellishes it with some new drawings and illustrations. The most pleasing feature to us is the space allotted to therapeutics. We have seen no work upon this subject which discusses so thoroughly and clearly the treatment of skin diseases. Happily, the author from his wide knowledge of general therapeutics is particularly fitted for the task.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., etc. Volume III. September, 1901. 8vo. 428 pages. Lea Brothers & Co., Philadelphia and New York. Issued quarterly. Price: Cloth, $10.00 per year.

This volume contains the following monographs: Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood Vessels, by William Ewart, M. D., F. R. C. P.; Dermatology and Syphilis, by William S. Gottheil, M. D.; Diseases of the Nervous System, by William G. Spiller, M. D., and Obstetrics, by Richard C. Norris, M. D.

This new issue keeps up well with the high standard of the previous volumes. The American and foreign publications reviewed therein are most carefully selected, and thus the synopsis of the progress made in each branch admirably complete.

Diseases of the Intestines. By Dr. I. Boas, Specialist for Gastro-Intestinal Diseases in Berlin. Authorized translation from the first German edition, with special additions by Seymour Basch, M. D. 560 pages. 8vo. D. Appleton & Co. Price: Cloth, $5.00.

The popularity of Dr. Boas' treatise in German has led to this translation. It is adapted principally to meet the needs of the general practitioner, but thorough description of physiologico-chemical processes and laboratory methods make it also valuable to scientific investigators in this line of work. Special additions to the chapters on appendicitis and hydrotherapeutics have been made by the translator.

A Laboratory Course in Bacteriology. For the use of Medical, Agricultural and Industrial Students. By Frederic P. Gorham, A. M., Professor of Biology, Brown University; Bacteriologist to the Health Department, Providence, Rhode Island. 12mo volume of 198 pages, with 97 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $1.25, net.

Bacteriology is essentially a laboratory study. It is only by actual laboratory work that it can be taught in such a manner as to serve any useful purpose. It is also a subject of very general scientific interest. Courses in bacteriology are no longer confined to the medical schools, but are being introduced into colleges and agricultural and industrial schools.

This work lays out a good course in bacteriology. It furnishes a good working manual for practical laboratory work. It gives in detail routine pro-

cedures, and its chief merit lies in the fact that the various steps in practical work are fully explained. Most text-books on bacteriology are lacking in what this book consists. Hence it can be recommended to students.

ATLAS AND EPITOME OF SPECIAL PATHOLOGIC HISTOLOGY. By Docent Dr. HERMANN DUERCK, of the Pathologic Institute of Munich. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology in Rush Medical College, Chicago. Vol. II.—Liver; Urinary Organs; Sexual Organs; Nervous System; Skin; Muscles; Bones. With 123 colored illustrations on 60 lithographic plates, and 192 pages of text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $3.00, net.

This volume continues the subject of Pathologic Histology in the Saunders Series of Hand-Atlases, and is, if anything, even handsomer than its companion volume, issued some months ago. The colored lithographs of this volume are beautifully reproduced, and are extremely accurate representations of the microscopic changes produced by disease. The great value of these plates is that they represent in the exact colors the effect of the stains which are of such great importance for the differentiation of tissue.

The volume is an important adjunct to the teaching of pathology. It is terse and impressive. It will serve as a substantial manual for students of medicine.

EICHHORST'S PRACTICE OF MEDICINE. A Text-Book of the Practice of Medicine. By DR. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the Medical Clinic in the University of Zurich. Translated and Edited by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Price, per set: Cloth, $6.00, net.

In view of Eichhorst's prominence as an authority on internal medicine, his exhaustive work on "Special Pathology and Therapeutics" was received with general satisfaction. His students, however, demanded of their master a work less voluminous, more concise, and yet a text-book meeting all of the requirements of the student and practitioner. This unanimous desire has been gratified through the publication of "Eichhorst's Practice of Medicine," practically a condensed edition of his larger work. This volume has been translated by Augustus A. Eshner, M. D., and for the sake of convenience divided into two volumes.

The first volume deals with diseases of the circulatory organs, the respiratory tract, the digestive organs, the genito-urinary organs, and, in part, with diseases of the nervous system.

Volume two takes up the nervous system, muscles, skin, spleen and blood, the disorders of metabolism and infectious diseases. A number of subjects, such as the skin, venereal diseases, impotence, sterility, etc., omitted from most text-books of this kind, are given due attention by the author of this work. He has succeeded in condensing much information in little space. The sentences are short, concise, and to the point. There are few repetitions and no superfluous statements. For the practitioner of medicine the work is ideal; as a text-book for students, but one criticism could be offered: its conciseness may at times presuppose knowledge which he does not possess. In view of the other extremes, however, indulged in by authors of text-books, this may be considered a virtue rather than a fault.

HUMAN PHYSIOLOGY. Prepared with Special Reference to Students of Medicine. By JOSEPH HOWARD RAYMOND, A. M., M. D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in Hoagland Laboratory, New York City. Second edition, entirely rewritten and greatly enlarged. Handsome octavo volume of 668 pages, 443 illustrations, twelve of them in colors, and four full-page lithographic plates. Philadelphia and London: W. B. Saunders & Company, 1901. Cloth, $3.50, net.

Since the first edition of this work scientific research has made such rapid progress in the study of human physiology, that the author deemed it imperative entirely to rewrite the work. In the extensive revision the same general subdivision of the subject has been retained, adding, however, a section on histology, which will be found fully adequate for a thorough understanding of the physiologic anatomy of the organs whose functions are under discussion. Special attention has been given to the influence of alcohol upon mouth and gastric digestion, to the subject of deglutition and the gastric movements as observed by use of the Röntgen rays, and to the physiologic significance of gastrectomy.

Internal secretion, thyroid treatment, blood coagulation, fat absorption, and the most recent contributions on the genesis of uric acid has been concisely, though thoroughly, considered.

Laryngeal Photography, by Professor French, and the subject of voice production have been extensively discussed, elucidating the text by numerous well-selected illustrations.

In the portion of the volume devoted to the nervous functions, many changes have been introduced, necessitated by the general acceptance of the "neurone theory;" and the sections treating on the senses of sight and hearing have also been greatly elaborated.

We fail to see reference to the bactericidal and other properties of even normal human blood as has been recently investigated. The size of some chapters to others is hardly proportionate to their importance. Fifty pages are devoted to the sense of sight, and only seven to vital heat.

Altogether a very useful work.

PATHOLOGICAL TECHNIQUE. A Practical Manual for Workers in Pathological Histology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By FRANK P. MALLORY, A. M., M. D., Associate Professor of Pathology, Harvard University Medical School; and JAMES H. WRIGHT, A. M., M. D., Instructor in Pathology, Harvard University Medical School. Second edition, revised and enlarged. Octavo, 432 pages, with 137 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $3.00, net.

In revising the book for the new edition the authors have kept in view the needs of the laboratory worker, whether student, practitioner or pathologist, for a practical manual of histological and bacteriological methods in the study of pathological material. Many parts have been rewritten, many new methods have been added, and the number of illustrations has been considerably increased. The majority of the latter are beautiful original photomicrographs of various species of bacteria.

It is by far the best book in the English language on pathological technique. While much therein has been borrowed from German literature, still the work has its sphere of usefulness for those who do not read German.